2006-08 ENGINE

Engine Assembly - Civic (Except Hybrid)

ENGINE ASSEMBLY (R18A1)

NOTE: Go to ENGINE ASSEMBLY (GX) (SUPPLEMENT) article for additional information for the GX model.

SPECIAL TOOLS

Ref. No.	Tool Number	Description	Qty
①	07AAK-SNAA120	Universal Eyelet	1
②	07AAK-SNAA400	1.8 Support Eyelet	1
③	07AAK-SNAA500	1.8 Support Bolt	1

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Fig. 1: Identifying Special Tools
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ENGINE REMOVAL

Special Tools Required

- Universal eyelet 07AAK-SNAA120
- 1.8 support eyelet 07AAK-SNAA400
- 1.8 support bolt 07AAK-SNAA500
- Front subframe adapter VSB02C000016 *
- 2006 Civic engine hanger VSB02C000025 *
- Engine support hanger, A and Reds AAR-T-12566 *

* : Available through Honda Tool and Equipment Program, 1-888-424-6857

NOTE:

- **Use fender covers to avoid damaging painted surfaces.**
- **To avoid damaging the wiring and terminals, unplug the wiring connectors carefully while holding the connector portion.**
- **Mark all wiring and hoses to avoid misconnection. Also, be sure that they do not contact other wiring or hoses, or interfere with other parts.**

1. Make sure you have the anti-theft code for the audio system and the navigation system (if equipped), then write down the audio presets.
2. Secure the hood in the wide open position (support rod in the lower hole).

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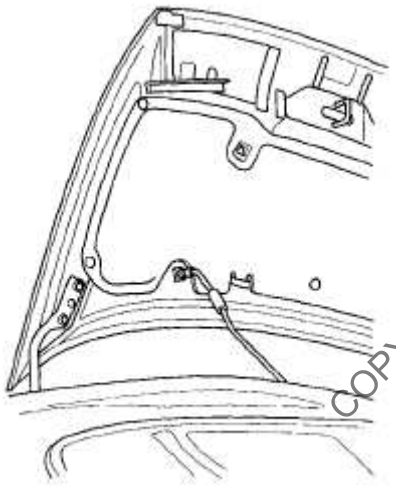

Fig. 2: Identifying Support Rod In Lower Hole
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Relieve the fuel pressure (see **FUEL PRESSURE RELIEVING**).
4. Disconnect the negative cable from the battery, then disconnect the positive cable.
5. Remove the battery.
6. Remove the air cleaner assembly (see **THROTTLE BODY CLEANING**).
7. Remove the cowl cover and under-cowl panel (see **FRONT GRILLE COVER REPLACEMENT**).
8. Remove the injector cover.

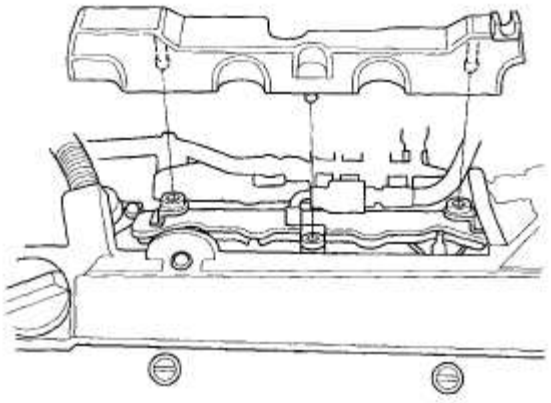

Fig. 3: Identifying Injector Cover
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9. Remove the quick-connect fitting cover (A), then disconnect the fuel feed hose (see **FUEL LINE/QUICK-CONNECT FITTING REMOVAL**).

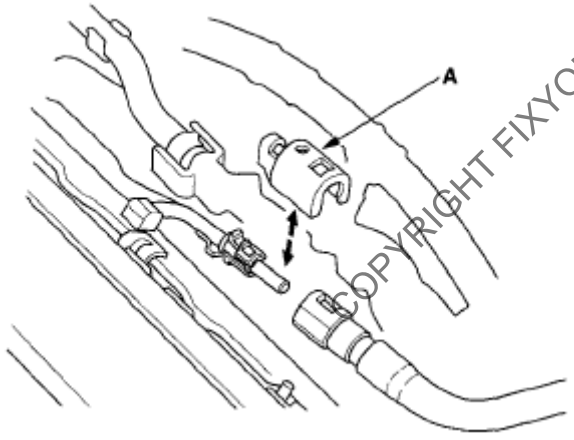

Fig. 4: Identifying Quick-Connect Fitting Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Remove the evaporative emission (EVAP) canister hose (A), brake booster vacuum hose (B), and power steering (P/S) hose clamp (C).

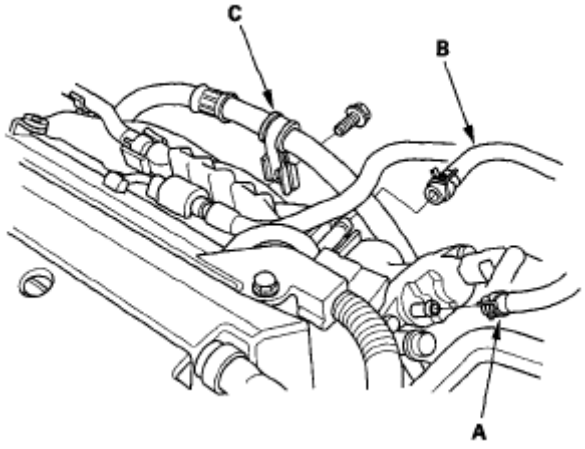

Fig. 5: Identifying Evaporative Emission (EVAP) Canister Hose And Brake Booster Vacuum Hose
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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11. Remove the battery cables (A) from the under-hood fuse/relay box.

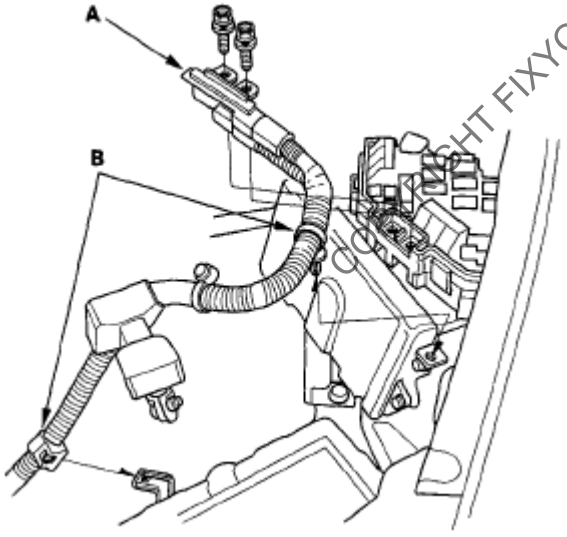

Fig. 6: Identifying Battery Cables And Harness Clamps
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Remove the harness clamps (B).
13. Remove the engine control module (ECM)/powertrain control module (PCM) cover (A), then remove the three bolts (B) securing the ECM/PCM.

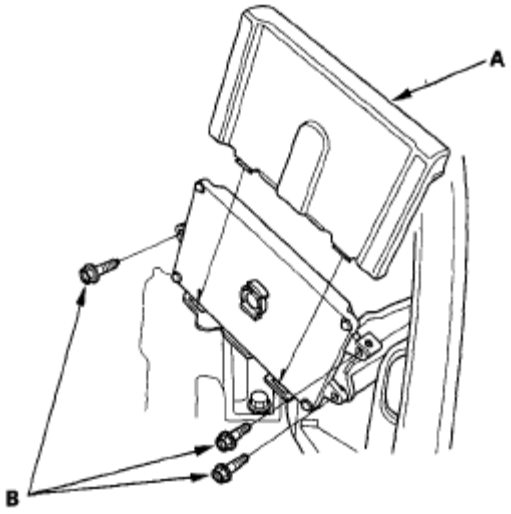

Fig. 7: Identifying Control Module (PCM) Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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14. Disconnect the ECM/PCM connectors (A) and the engine wire harness connectors (B).

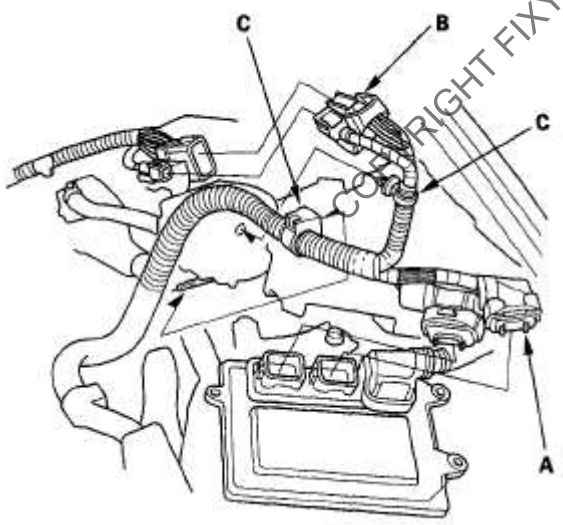

Fig. 8: Identifying ECM/PCM Connectors And Engine Wire Harness Connectors
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Remove the harness clamps (C).
16. M/T model: Remove the two bolts (A) securing the harness holder, then remove the harness clamp (B).

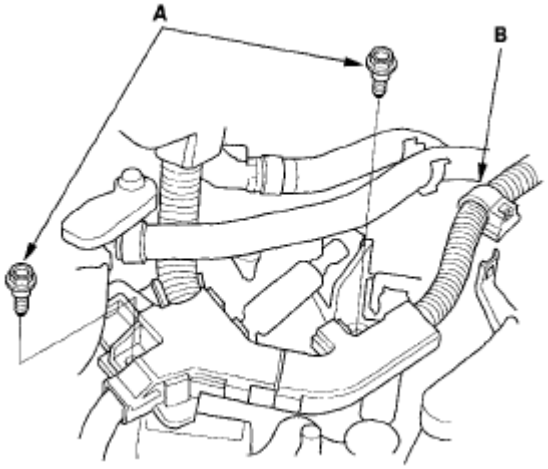

Fig. 9: Identifying Harness Clamp Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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17. M/T model: Remove the shift cable (see step 9 on **TRANSMISSION REMOVAL**).
18. M/T model: Remove the clutch slave cylinder, and the clutch line bracket mounting bolt (see step 7 on **TRANSMISSION REMOVAL**).
19. Remove the drive belt (see **DRIVE BELT INSPECTION**).
20. Remove the radiator cap.
21. Raise the vehicle on the lift to full height.
22. Remove the front wheels.
23. Remove the splash shield.

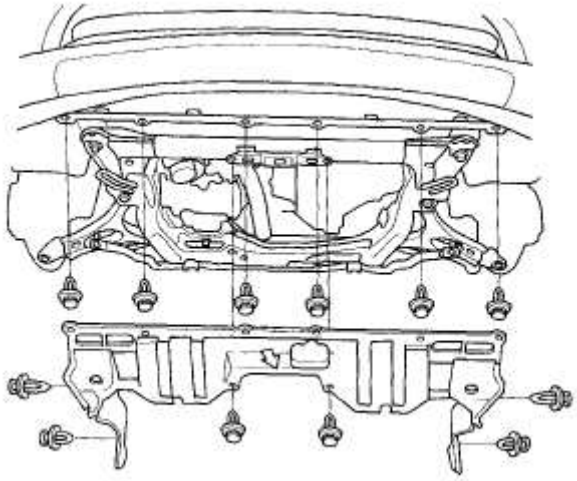

Fig. 10: Identifying Splash Shield
Courtesy of AMERICAN HONDA MOTOR CO., INC.

24. Loosen the drain plug in the radiator, and drain the engine coolant (see **COOLANT REPLACEMENT**).
25. Drain the engine oil (see **OIL PRESSURE TEST**).
26. Drain the transmission fluid:
    - Manual transmission (see step 3 on **TRANSMISSION REMOVAL**)
    - Automatic transmission (see step 3 on **ATF REPLACEMENT**)
27. Remove exhaust pipe A.

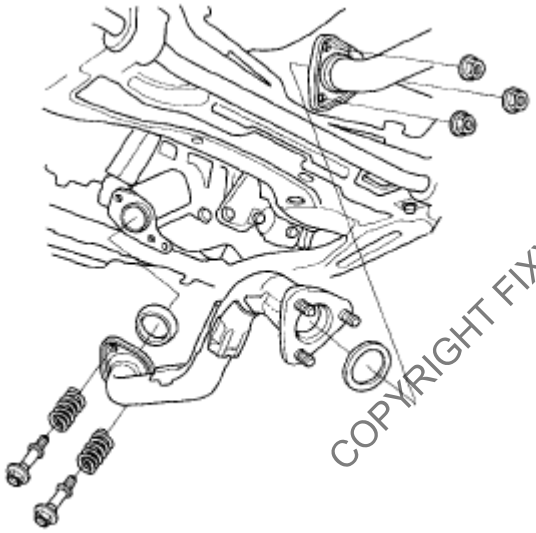

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Fig. 11: Identifying Exhaust Pipe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

28. A/T model: Remove the shift cable (see step 41 on **TRANSMISSION REMOVAL**).
29. Separate the stabilizer links (see **STABILIZER LINK REMOVAL/INSTALLATION**).
30. Separate the knuckles from the lower arms (see step 5 on **DRIVESHAFT REMOVAL**).
31. Remove the driveshafts (see step 8 on **DRIVESHAFT REMOVAL**). Coat all precision-finished surfaces with clean engine oil. Tie plastic bags over the driveshaft ends.

32. Remove the power steering (P/S) pump without disconnecting the P/S hoses from the pump.

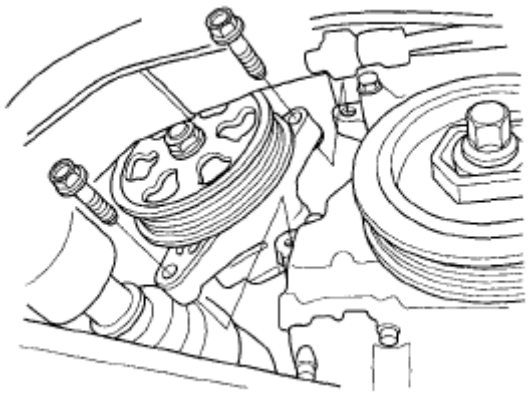

Fig. 12: Identifying Power Steering (P/S) Pump
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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33. Unclamp the power steering fluid line clamp (A) on the front subframe, and remove the P/S line mounting bolts (B).

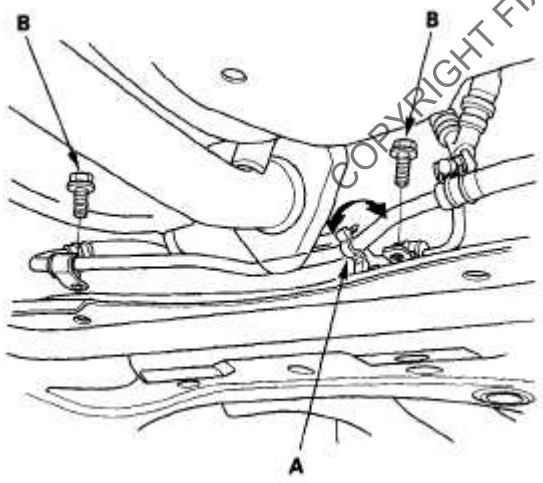

Fig. 13: Identifying P/S Line Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

34. Remove the steering gearbox mounting bolt (A), then remove the steering gearbox stiffener (B).

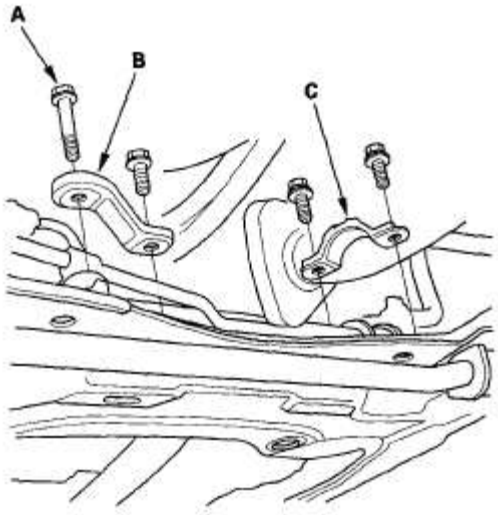

Fig. 14: Identifying Steering Gearbox Stiffener And Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

35. Remove the steering gearbox bracket (C).
36. Remove the steering gearbox mounting bolts (A), then remove the steering gearbox stiffener (B).

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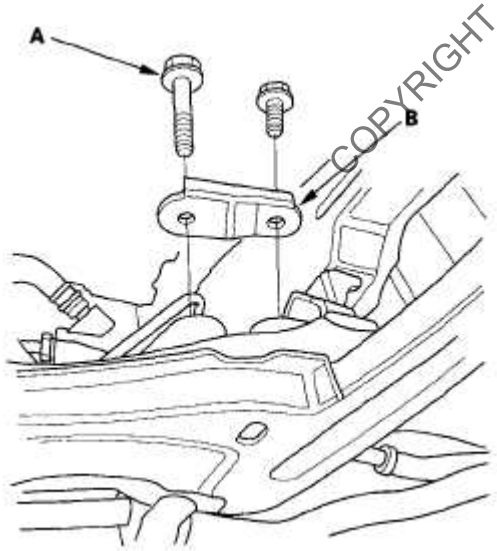

Fig. 15: Identifying Steering Gearbox Stiffener And Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

37. Lower the vehicle on the lift.
38. Remove the radiator (see **RADIATOR AND FAN REPLACEMENT**).

39. Disconnect the A/C compressor clutch connector (A), then remove the harness clamp (B).

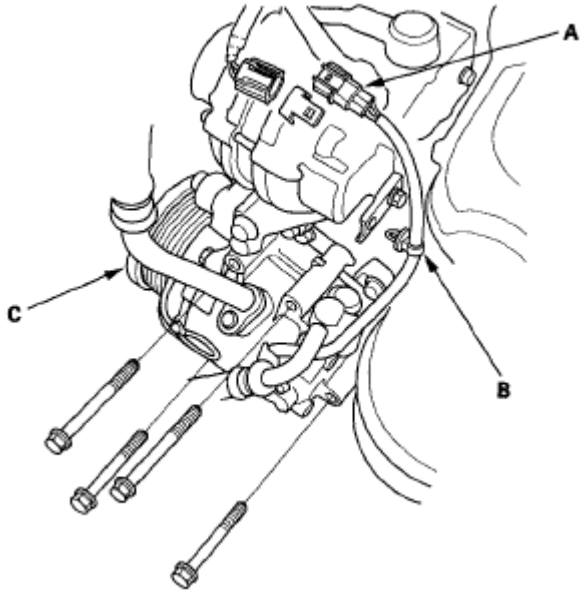

Fig. 16: Identifying A/C Compressor Clutch Connector And Harness Clamp
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40. Remove the A/C compressor (C) without disconnecting the A/C hoses.
41. Remove the heater hoses.

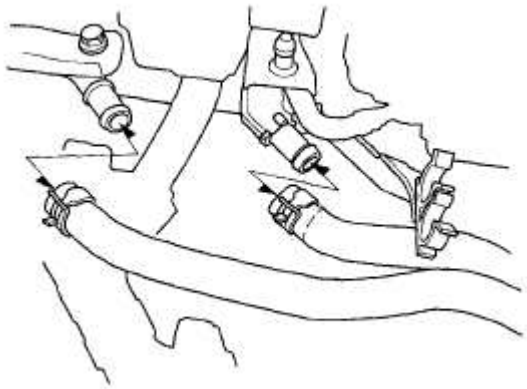

Fig. 17: Identifying Heater Hoses
Courtesy of AMERICAN HONDA MOTOR CO., INC.

42. Remove the air cleaner housing mounting bracket (A), and install support

eyelet (B) behind the breather pipe (C) and down to the threaded hole (D) on the cylinder head.

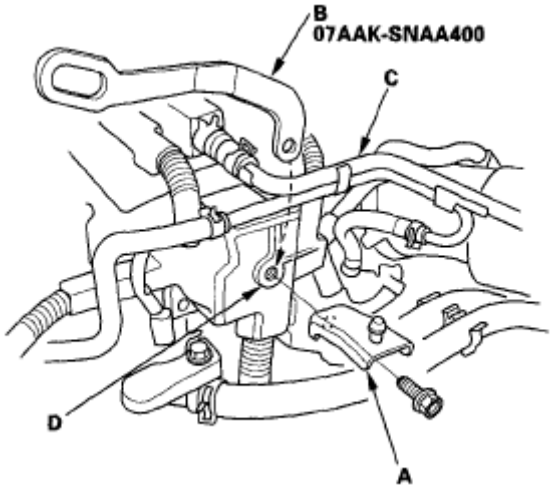

Fig. 18: Identifying Air Cleaner Housing Mounting Bracket And Support Eyelet
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43. Attach the support eyelet (A) to the cylinder head with the support bolt (B). Tighten the bolt by hand.

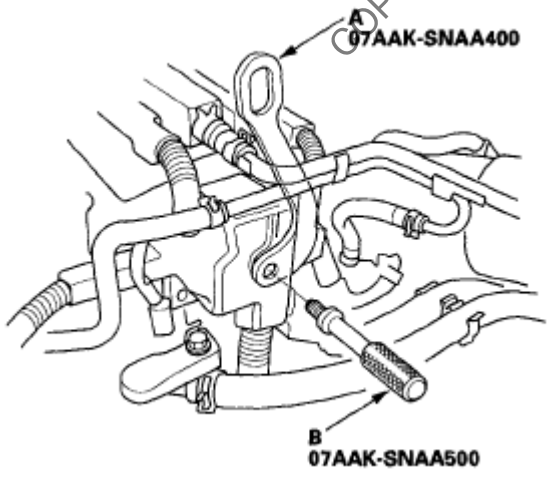

Fig. 19: Identifying Support Eyelet And Support Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

44. Install the front leg assembly (A), hook (B), and wing nut (C) from an A and Reds engine support hanger (AAR-T-12566) onto the engine hanger. Carefully

position the engine hanger on the vehicle, and attach the hook to the slotted hole in the support eyelet (D). Tighten the wing nut by hand to lift and support the engine/transmission.

NOTE: Use care when working around the windshield.

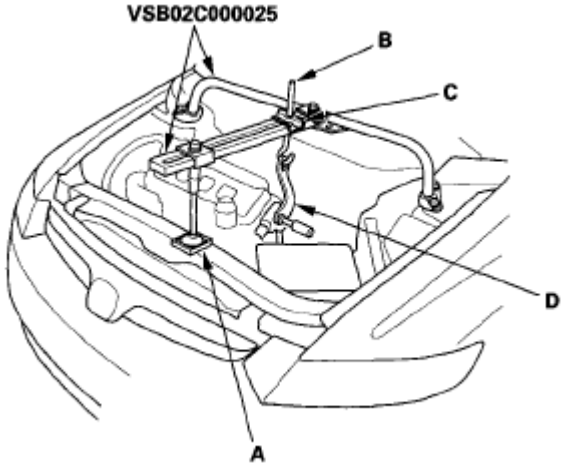

Fig. 20: Identifying Special Tools
Courtesy of AMERICAN HONDA MOTOR CO., INC.

45. Raise the vehicle on the lift to full height.
46. Remove the lower torque rod. M/T

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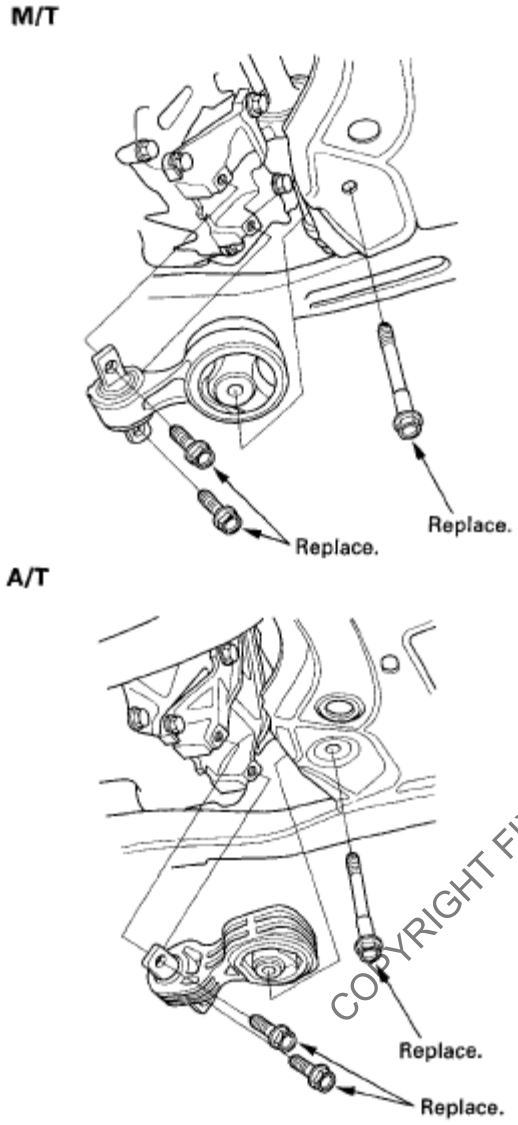

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Fig. 21: Identifying Lower Torque Rod
Courtesy of AMERICAN HONDA MOTOR CO., INC.

47. Note the reference marks (A) on both sides of the front subframe that line up with the body (B).

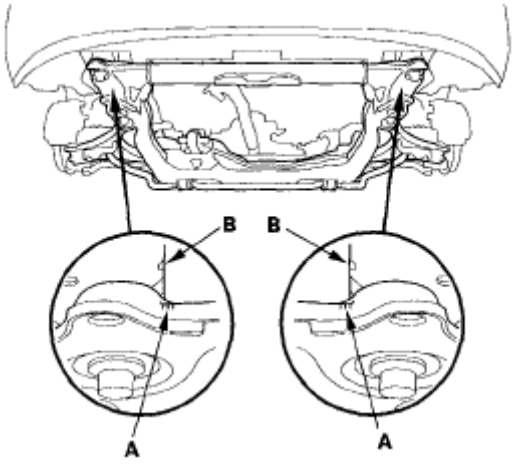

Fig. 22: Identifying Marks On Both Sides Of Front Subframe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

48. Loosen the front subframe body mount bracket mounting bolts (A) on both sides.

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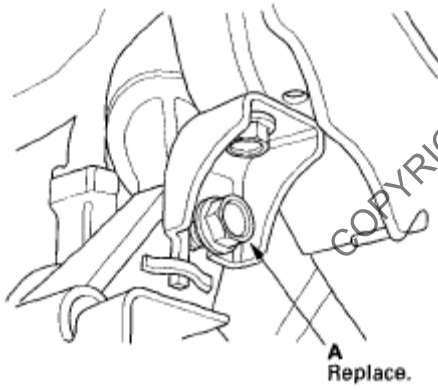

Fig. 23: Identifying Front Subframe Body Bracket Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

49. Attach the front subframe adapter (A) to the front subframe and hang the belt of the front subframe adapter over the front of the subframe, then secure the belt with its stop.

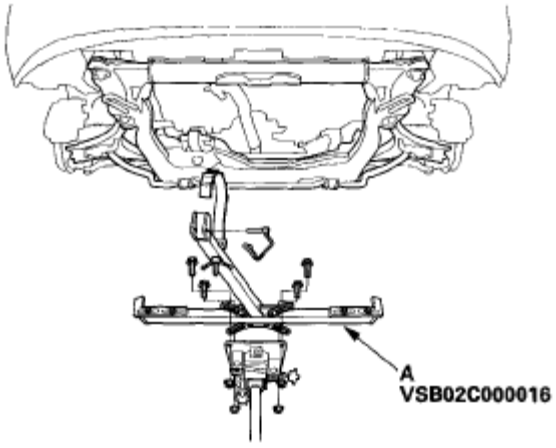

Fig. 24: Identifying Front Subframe Adapter
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50. Raise the jack and line up the slots in the arms with the bolt holes on the corner of the jack base, then attach them with bolts securely.
51. Remove the front subframe.

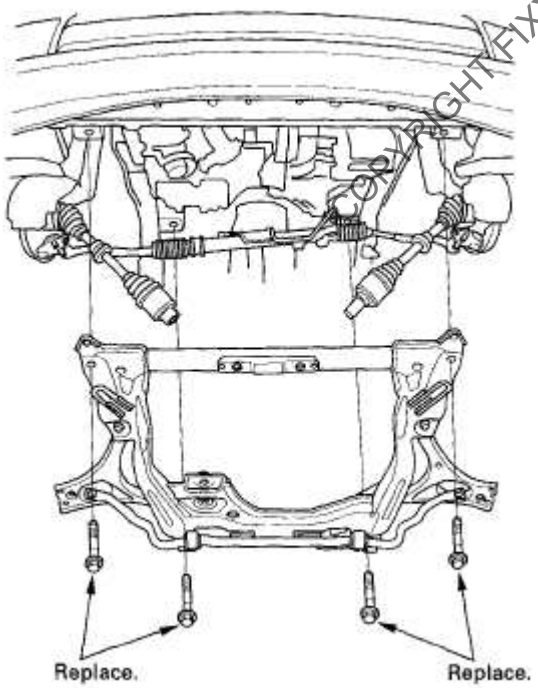

Fig. 25: Identifying Front Subframe Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

52. Lower the vehicle on the lift.

53. Remove the ground cable (A), then install the special tool with a 10 x 1.25 x 20 mm bolt (B).

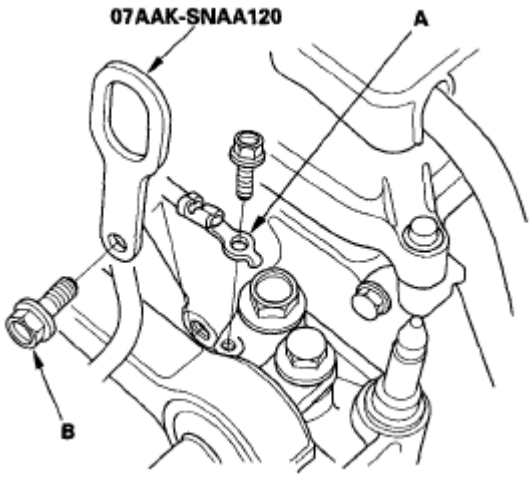

Fig. 26: Identifying Ground Cable
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54. Attach a chain hoist (A) to the special tool (B) and transmission hook (C). Lift up on the engine/transmission until it's securely supported by the chain hoist, and remove the engine support hanger from the engine and vehicle.

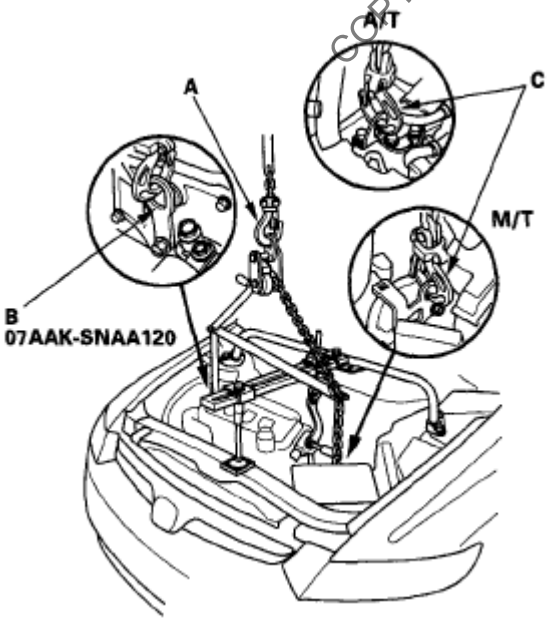

Fig. 27: Lifting Up On Engine/Transmission
Courtesy of AMERICAN HONDA MOTOR CO., INC.

55. Remove the side engine mount bracket mounting bolt and nut.

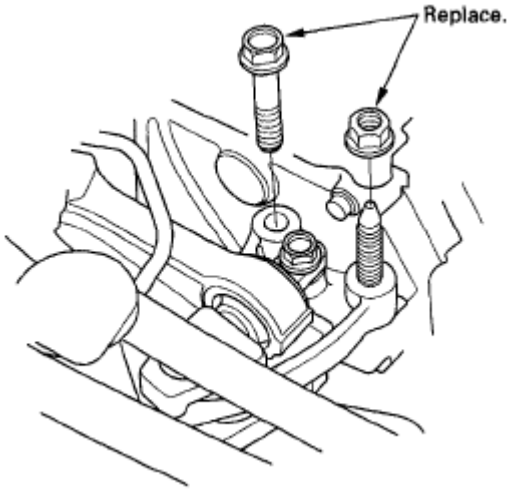

Fig. 28: Identifying Engine Mount Bracket Mounting Bolt And Nut
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56. Remove the transmission mounting bolt and nuts (A).

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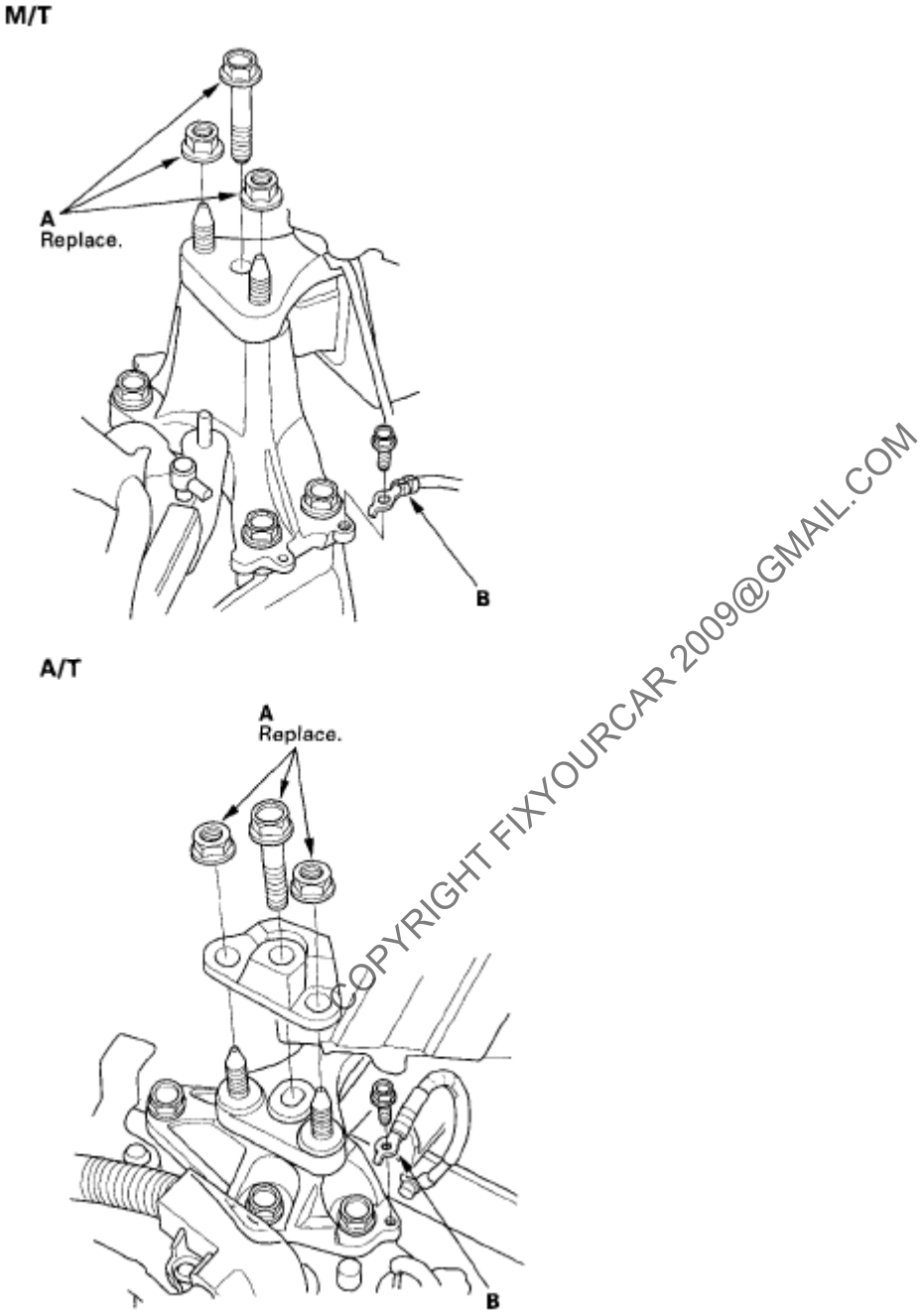

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Fig. 29: Identifying Transmission Mounting Bolt And Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

57. Remove the ground cable (B).
58. Check that the engine/transmission is completely free of vacuum hoses, fuel and coolant hoses, and electrical wiring.
59. Slowly lower the engine/transmission about 150 mm (6 in.). Check once again

that all hoses and electrical wiring are disconnected and free from the engine/transmission, then lower it all the way.

60. Disconnect the chain hoist from the engine/transmission.
61. Raise the vehicle all the way, and remove the engine/transmission from under the vehicle.

ENGINE INSTALLATION

Special Tools Required

- Universal eyelet 07AAK-SNAA120
- 1.8 support eyelet 07AAK-SNAA400
- 1.8 support bolt 07AAK-SNAA500
- Front subframe adapter VSB02C000016 *
- 2006 Civic engine hanger VSB02C000025 *
- Engine support hanger, A and Reds AAR-T-12566 *

* : Available through Honda Tool and Equipment Program, 1-888-424-6857

1. Install the accessory brackets and tighten their bolts to the specified torques.

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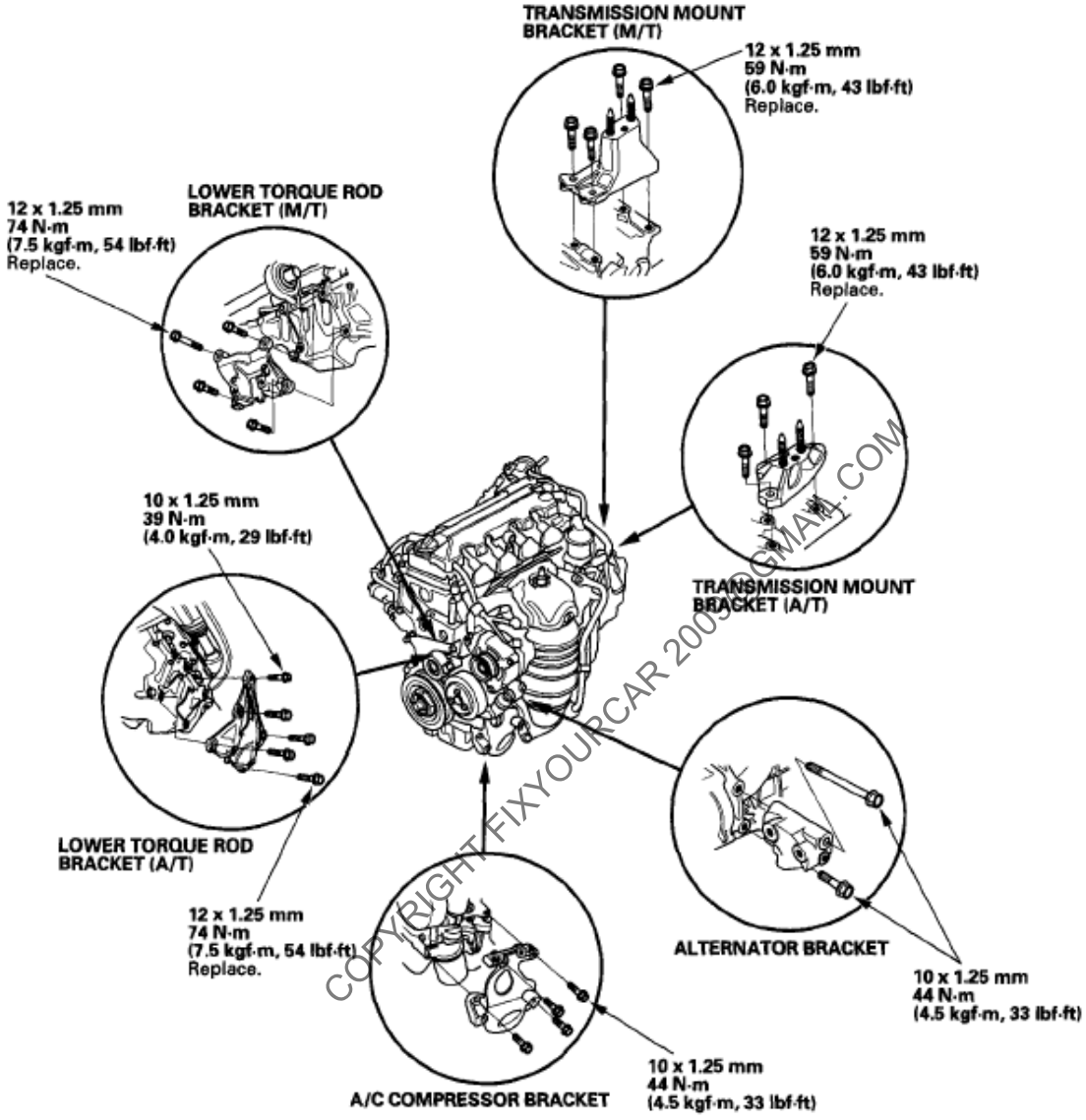

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Fig. 30: Identifying Engine Components Location (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Position the engine/transmission under the vehicle. Be sure that they are properly aligned. Carefully lower the vehicle until the engine and transmission are properly positioned in the engine compartment, Make sure the vehicle is not resting on any part of the engine or transmission. Lift and support the engine with a chain hoist and carefully raise the engine/transmission into place.

NOTE: Reinstall the mounting bolts/support nuts in the

sequence given in the following steps. Failure to follow this sequence may cause excessive noise and vibration, and reduce engine mount life.

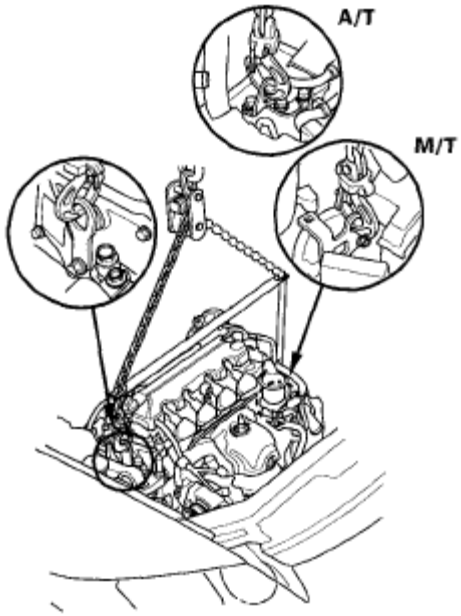

Fig. 31: Lifting Engine With Chain Hoist
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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3. Install support eyelet (A) behind the breather pipe (B) and down to the thread hole (C) on the cylinder head.

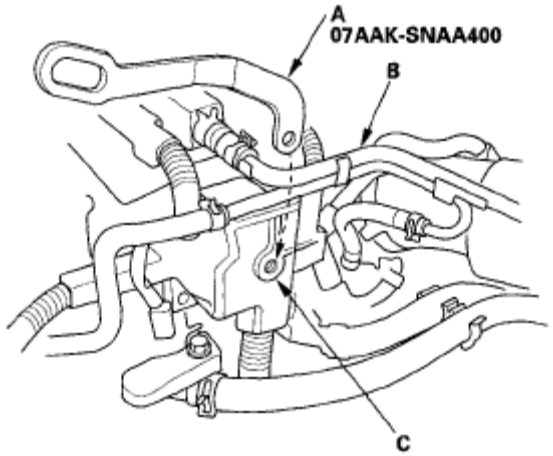

Fig. 32: Identifying Support Eyelet
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Attach the support eyelet (A) to the cylinder head with the support bolt (B). Tighten the bolt by hand.

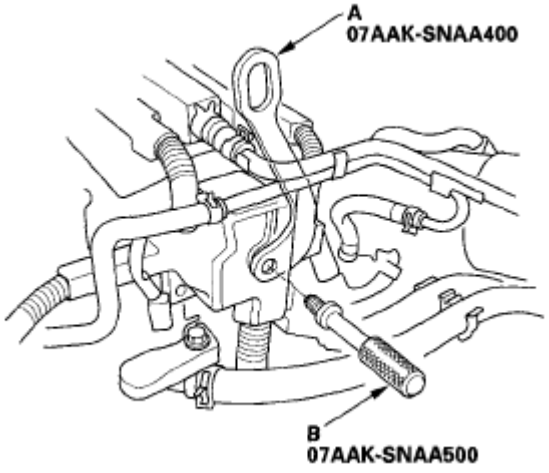

Fig. 33: Identifying Support Eyelet To Cylinder Head With Support Bolt
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5. Install the front leg assembly (A), hook (B), and wing nut (C) from an A and Reds engine support hanger (AAR-T-12566) onto the engine hanger. Carefully position the engine hanger on the vehicle, and attach the hook to the slotted hole in the support eyelet (D). Tighten the wing nut by hand to lift and support the engine/transmission.

NOTE: Use care when working around the windshield.

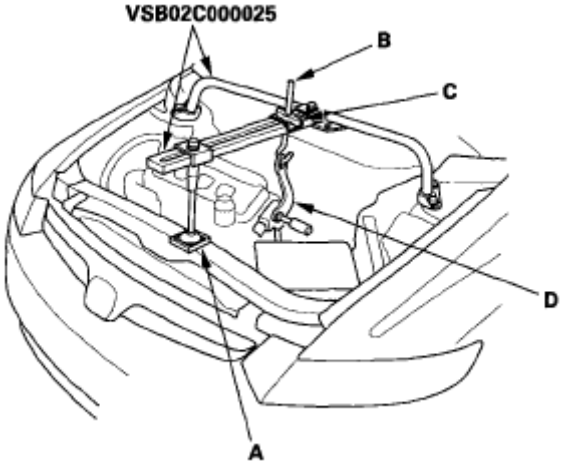

Fig. 34: Identifying Special Tools

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6. Loosen the upper torque rod mounting bolt (A).

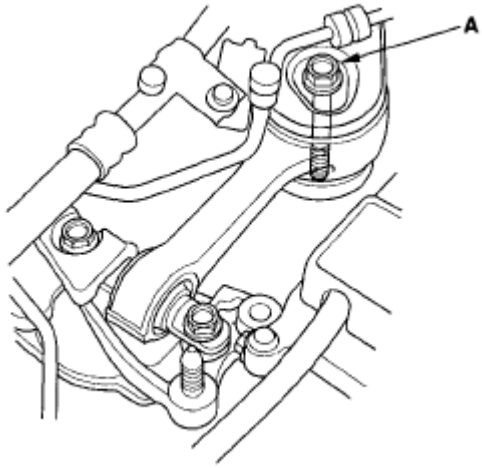

Fig. 35: Identifying Upper Torque Rod Mounting Bolt
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7. Tighten the new side engine mount bracket mounting bolt and nut.

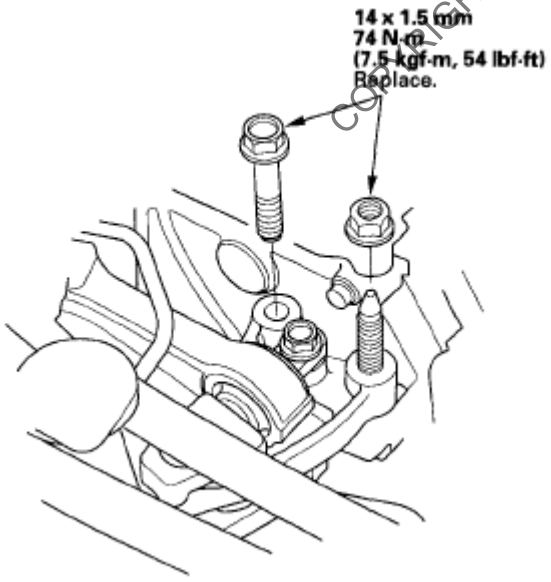

Fig. 36: Identifying Engine Mount Bracket Mounting Bolt And Nut (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Tighten the new transmission mounting bolt and nuts (A).

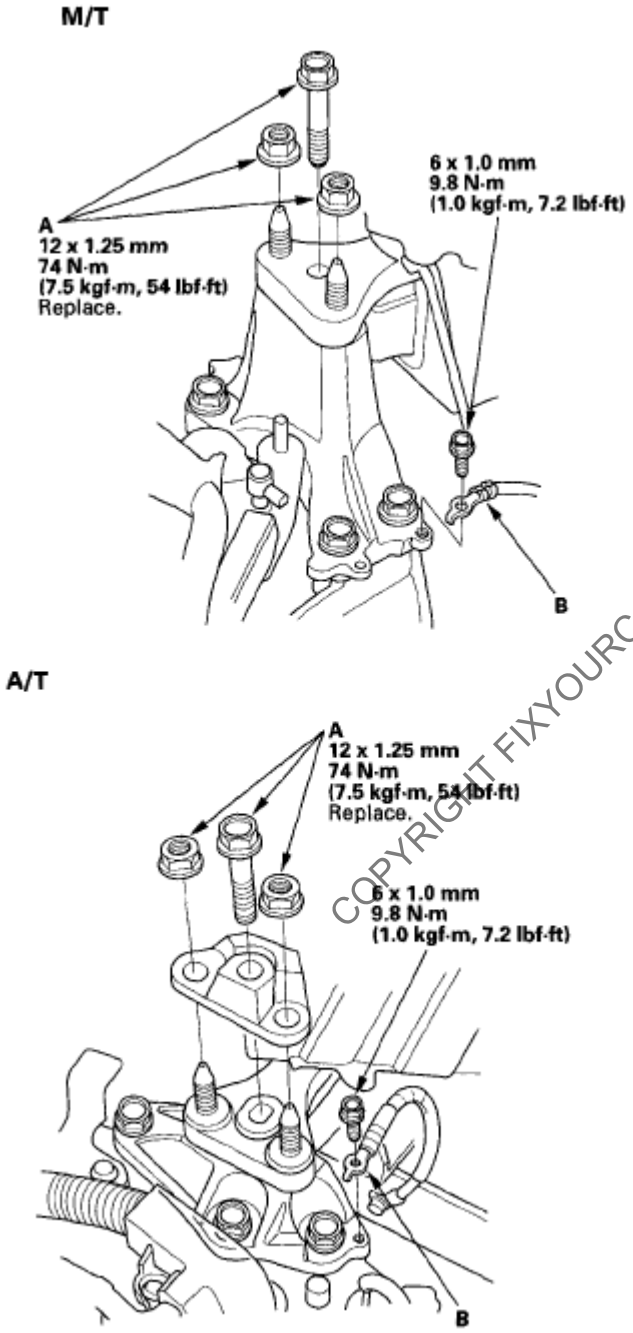

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Fig. 37: Identifying Transmission Mounting Bolt And Nuts (With Torque Specifications)
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9. Install the ground cable (B).

10. Remove the chain hoist, then raise the vehicle on the hoist to full height.
11. Using the front subframe adapter (A) and a jack, raise the front subframe up to body.

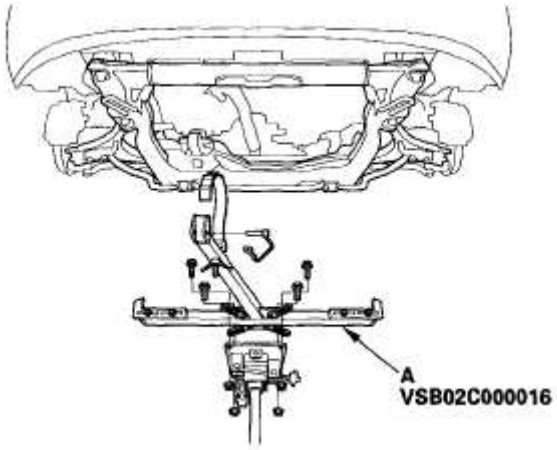

Fig. 38: Identifying Front Subframe Adapter
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12. Loosely install the new front subframe mounting bolts.

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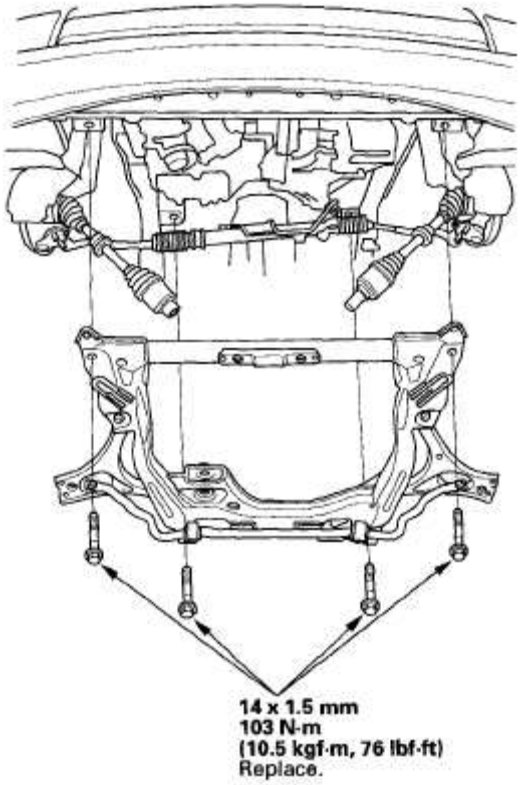

Fig. 39: Identifying Front Subframe Mounting Bolts (With Torque Specifications)
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13. Align the front subframe reference marks (A) to the body (B), as noted during removal. Tighten the subframe mounting bolts to the specified torque.

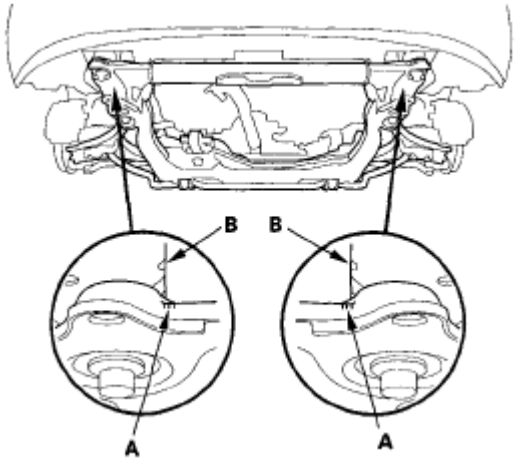

Fig. 40: Identifying Subframe Mark On Body

Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Remove the jack and front subframe adapter.
15. Tighten the new front subframe body mount bracket mounting bolts on both sides.

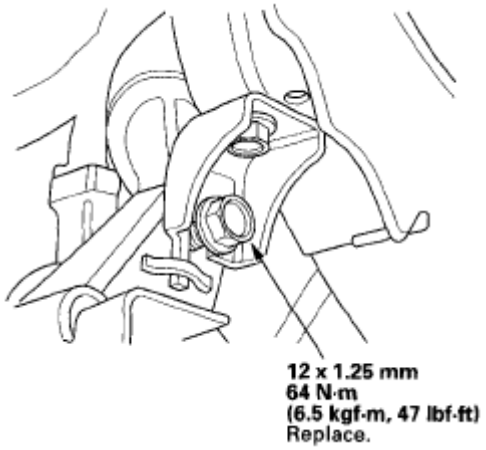

Fig. 41: Identifying Subframe Body Mount Bracket Mounting Bolts (With Torque Specifications)
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16. Install the lower torque rod, then tighten the new lower torque rod mounting bolts in the numbered sequence shown.

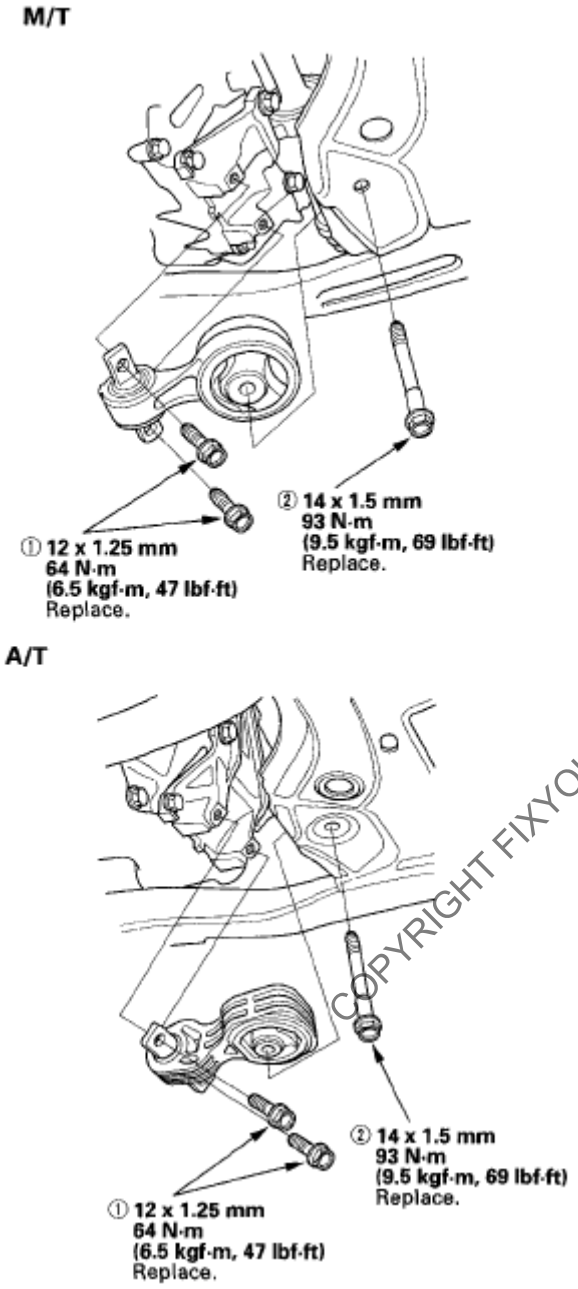

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Fig. 42: Identifying Tightening Sequence For Lower Torque Rod Mounting Bolts (With Torque Specifications)
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17. Lower the vehicle on the lift, and remove the engine hanger, support eyelet, and bolt.
18. Tighten the upper torque rod mounting bolt.

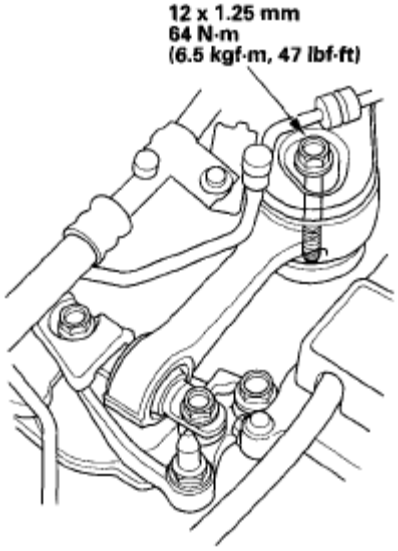

Fig. 43: Identifying Upper Torque Rod Mounting Bolt (With Torque Specifications)
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19. Remove the special tool and bolt (A), then install the ground cable (B).

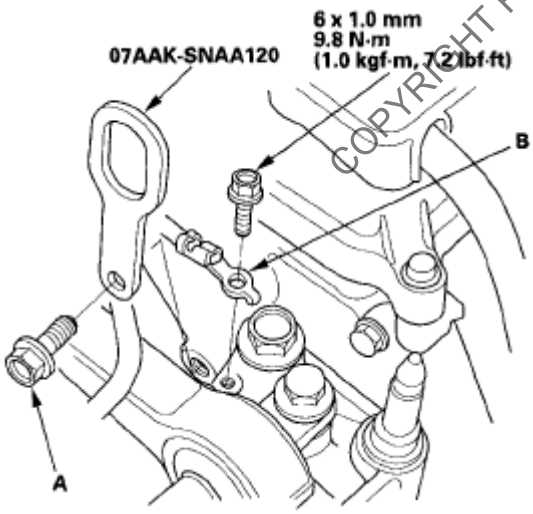

Fig. 44: Identifying Special Tool (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Raise the vehicle on the lift to full height.
21. Install the steering gearbox stiffener (A), then tighten the steering gearbox mounting bolt and stiffener bolt.

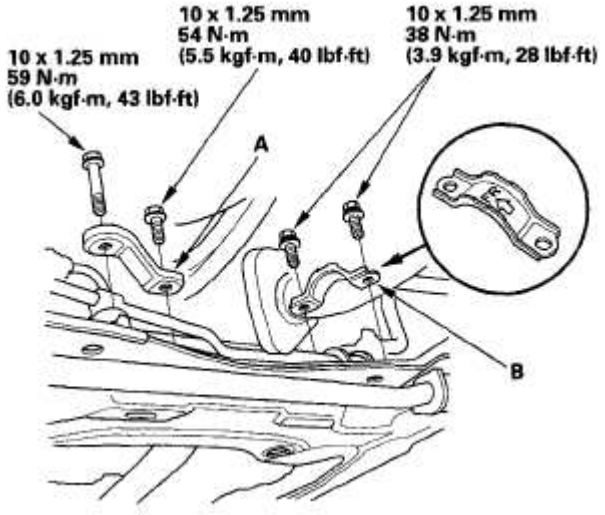

Fig. 45: Identifying Steering Gearbox Mounting Bolt (With Torque Specifications)
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22. Position the "FR" mark to the front of the vehicle, then install the steering gearbox bracket (B).
23. Install the steering gearbox stiffener (A), then tighten the steering gearbox mounting bolt and stiffener bolt.

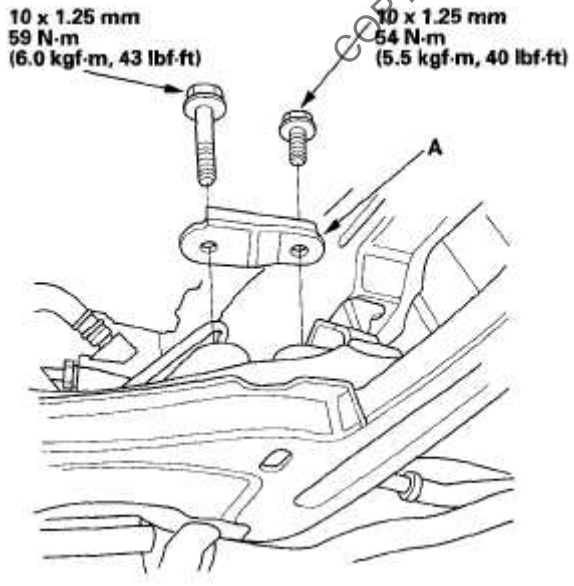

Fig. 46: Identifying Steering Gearbox Mounting And Stiffener Bolt (With Torque Specifications)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

24. Install the power steering (P/S) line on the clamp (A), then install the P/S line brackets (B) on the subframe.

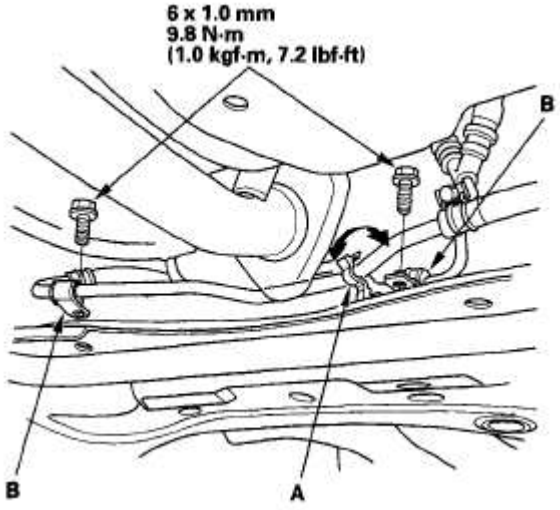

Fig. 47: Identifying P/S Line Brackets (With Torque Specifications)
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25. Install the P/S pump.

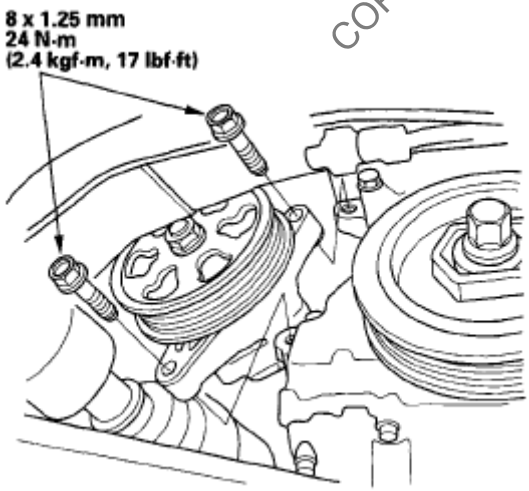

Fig. 48: Identifying P/S Pump Bolts (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

26. A/T model: Install the shift cable (see step 15 on **TRANSMISSION**

INSTALLATION).

27. Install a new set ring on the end of each driveshaft, then install the driveshafts. Make sure each ring "clicks" into place in the differential and intermediate shaft.
28. Connect the lower arms to the knuckles (see step 5 on **LOWER ARM REMOVAL/INSTALLATION**).
29. Connect the stabilizer links (see **STABILIZER LINK REMOVAL/INSTALLATION**).
30. Install exhaust pipe A. Use new gaskets (B) and new self-locking nuts (C).

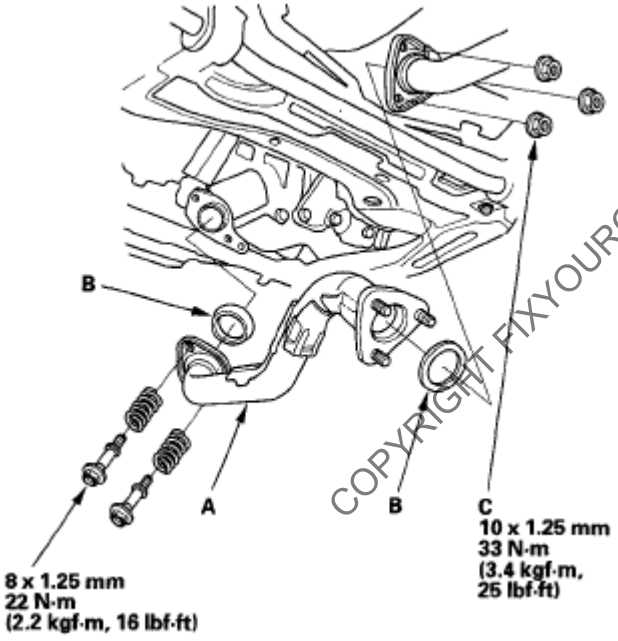

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Fig. 49: Identifying Exhaust Pipe And Self-Locking Nuts (With Torque Specifications)
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31. Install the splash shield

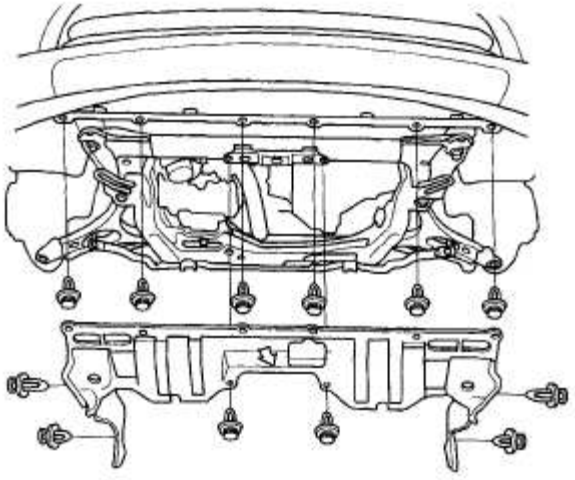

Fig. 50: Identifying Splash Shield
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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32. Lower the vehicle on the lift.
33. Install the heater hoses.

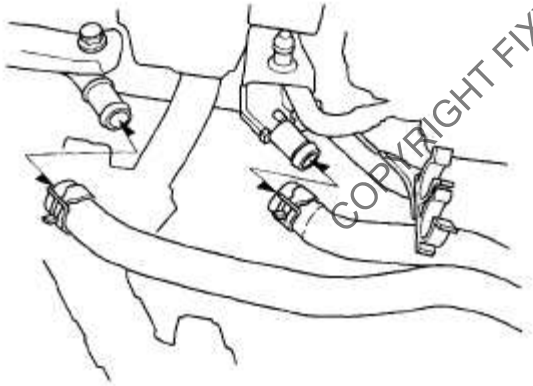

Fig. 51: Identifying Heater Hoses
Courtesy of AMERICAN HONDA MOTOR CO., INC.

34. Install the A/C compressor (A).

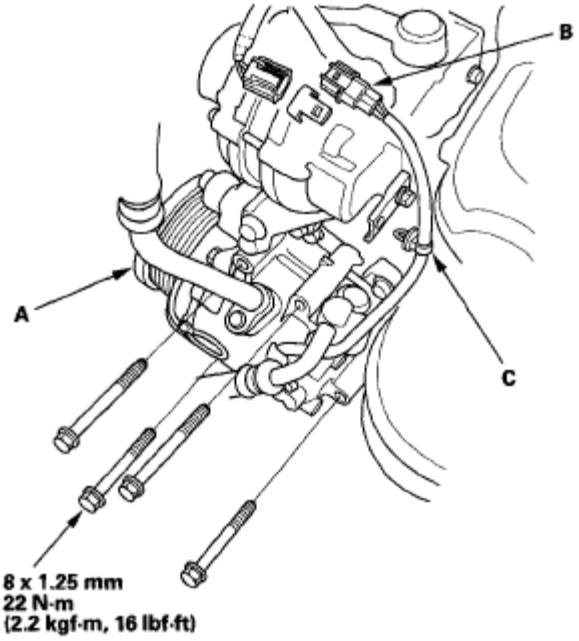

Fig. 52: Identifying A/C Compressor Clutch Connector (With Torque Specifications)
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35. Connect the A/C compressor clutch connector (B), then install the harness clamp (C).
36. Install the drive belt (see **DRIVE BELT REMOVAL/INSTALLATION**).
37. Remove the bulkhead, then install the radiator (see **RADIATOR AND FAN REPLACEMENT**).
38. M/T model: Install the clutch slave cylinder and clutch line bracket mounting bolt (see step 33 on **TRANSMISSION INSTALLATION**).
39. M/T model: Install the shift cable (see step 31 on **TRANSMISSION INSTALLATION**).
40. M/T model: Install the harness holder (A) and harness clamp (B).

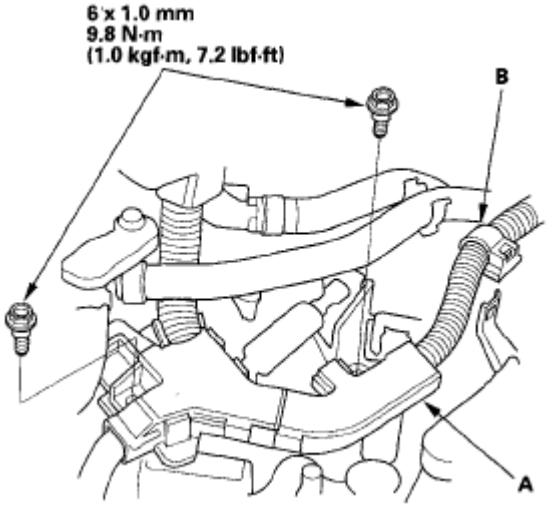

Fig. 53: Identifying Harness Holder And Harness Clamp (With Torque Specifications)
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41. Connect the engine control module (ECM)/powertrain control module (PCM) connectors (A) and engine wire harness connectors (B).

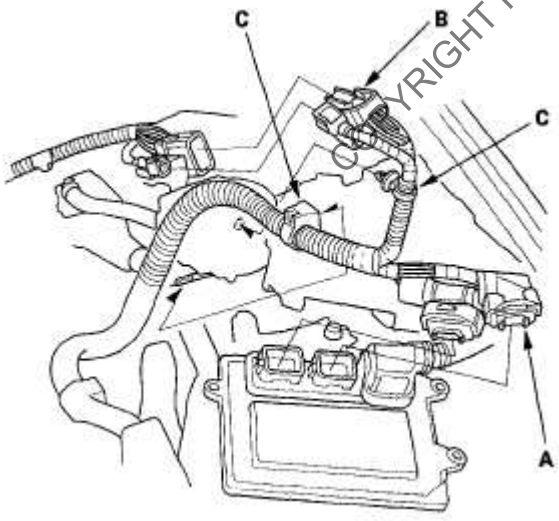

Fig. 54: Identifying Powertrain Control Module (PCM) Connectors
Courtesy of AMERICAN HONDA MOTOR CO., INC.

42. Install the harness clamps (C).
43. Install the ECM/PCM (A), then install the ECM/PCM cover (B).

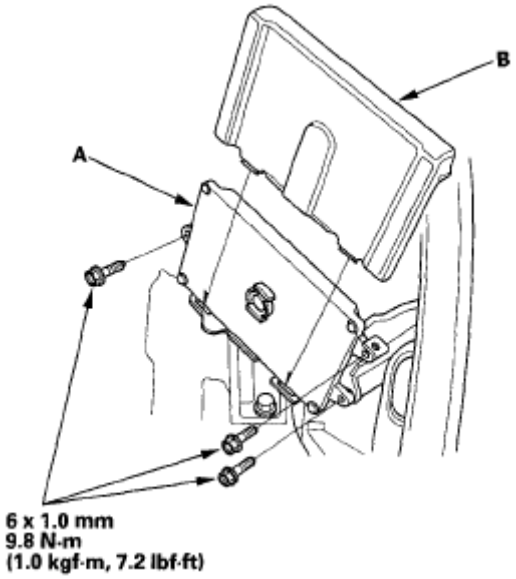

Fig. 55: Identifying ECM/PCM Cover And Bolts (With Torque Specifications)
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44. Install the battery cables (A) to the under-hood fuse/relay box.

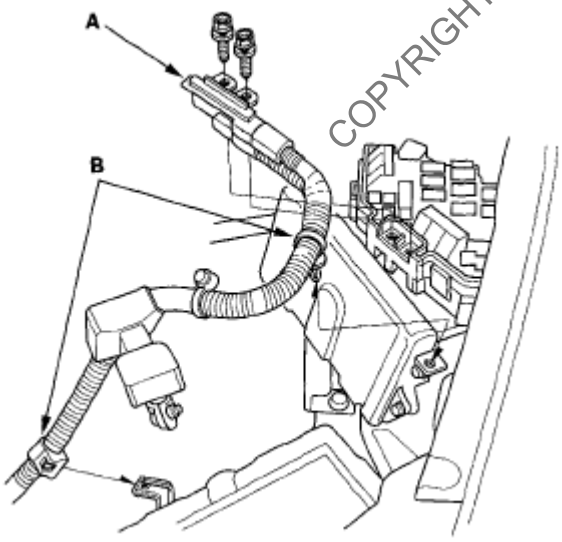

Fig. 56: Identifying Battery Cables And Harness Clamps
Courtesy of AMERICAN HONDA MOTOR CO., INC.

45. Install the harness clamps (B).
46. Install the evaporative emission (EVAP) canister hose (A), the brake booster

vacuum hose (B), and the power steering (P/S) hose clamp (C).

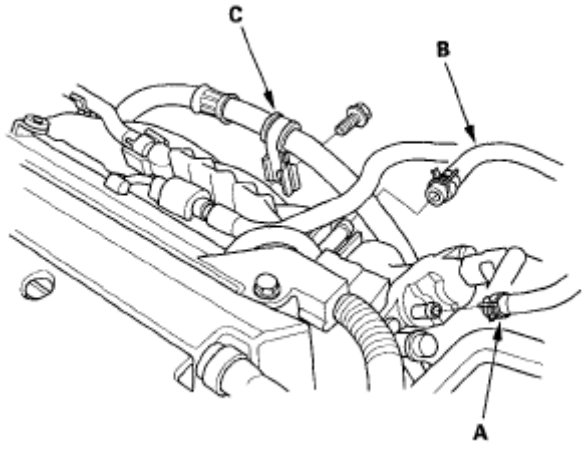

Fig. 57: Identifying Brake Booster Vacuum Hose And Power Steering (P/S) Hose Clamp
Courtesy of AMERICAN HONDA MOTOR CO., INC.

47. Connect the fuel feed hose (see **FUEL LINE/QUICK-CONNECT FITTING INSTALLATION**), then install the quick-connect fitting cover (A).

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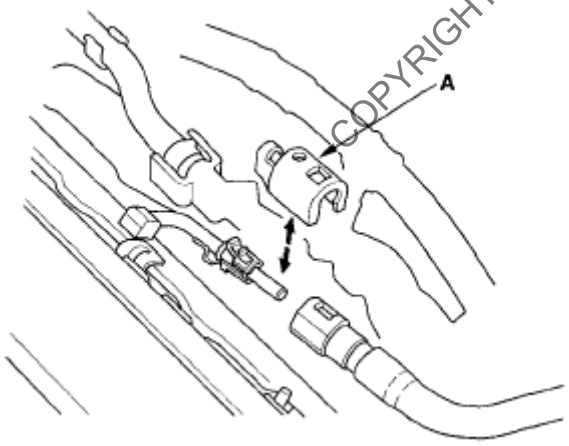

Fig. 58: Identifying Quick-Connect Fitting Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

48. Install the injector cover.

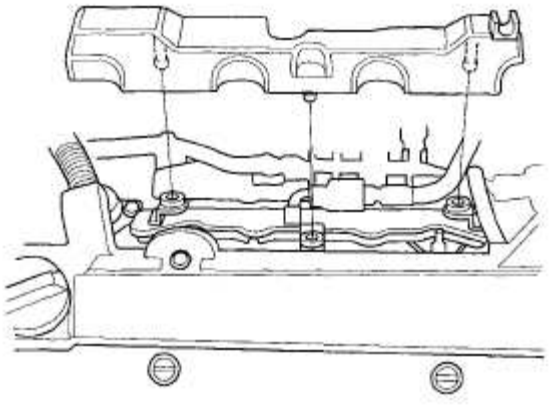

Fig. 59: Identifying Injector Cover
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49. Install the under-cowl panel and cowl cover (see **FRONT GRILLE COVER REPLACEMENT**).
50. Install the air cleaner housing mounting bracket (A) on the cylinder head.

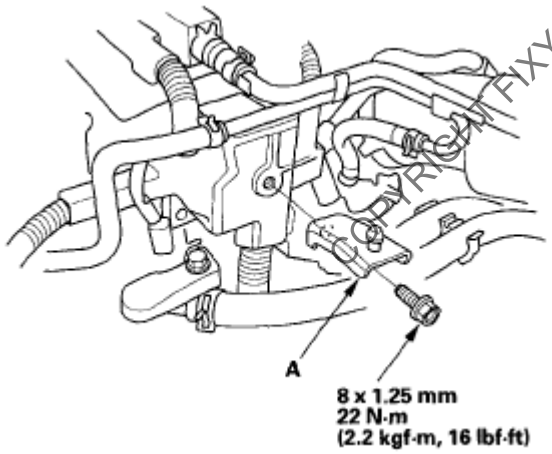

Fig. 60: Identifying Air Cleaner Housing Mounting Bracket (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

51. Install the air cleaner assembly (see **THROTTLE BODY CLEANING**).
52. Install the front wheels.
53. Install the battery. Clean the battery posts and cable terminals, then assemble them, and apply grease to prevent corrosion.
54. Inspect for fuel leaks: Turn the ignition switch ON (II) (do not operate the

starter) so the fuel pump runs for about 2 seconds and pressurizes the fuel line. Repeat this operation two or three times, then check for fuel leakage at any point in the fuel line.

55. A/T model: Move the shift lever to each gear, and verify that the A/T gear position indicator follows the transmission range switch.
56. M/T model: Check that the transmission shifts into gear smoothly.
57. Refill the engine with engine oil (see step 4 on **ENGINE OIL REPLACEMENT**).
58. Refill the transmission with fluid:
    - Manual transmission (see **TRANSMISSION FLUID INSPECTION AND REPLACEMENT**)
    - Automatic transmission (see step 5 on **ATF REPLACEMENT**)
59. Refill the radiator with engine coolant, and bleed air from the cooling system with the heater valve open (see step 8 on **COOLANT REPLACEMENT**).
60. Do the ECM/PCM reset procedure (see **ECM/PCM RESET**).
61. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see **ECM/PCM RESET**).
62. Inspect the idle speed (see **IDLE SPEED INSPECTION**).
63. Inspect the ignition timing (see **IGNITION TIMING INSPECTION**).
64. Check the wheel alignment (see **WHEEL ALIGNMENT**).
65. Enter the anti-theft code for the audio system and the navigation system (if equipped), then enter the audio presets.
66. Set the clock (on vehicles without navigation).

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SIDE ENGINE MOUNT REPLACEMENT

1. Support the engine with a jack and a wood block under the oil pan.
2. Remove the bolt (A) securing the A/C line, then remove the upper torque rod (B).

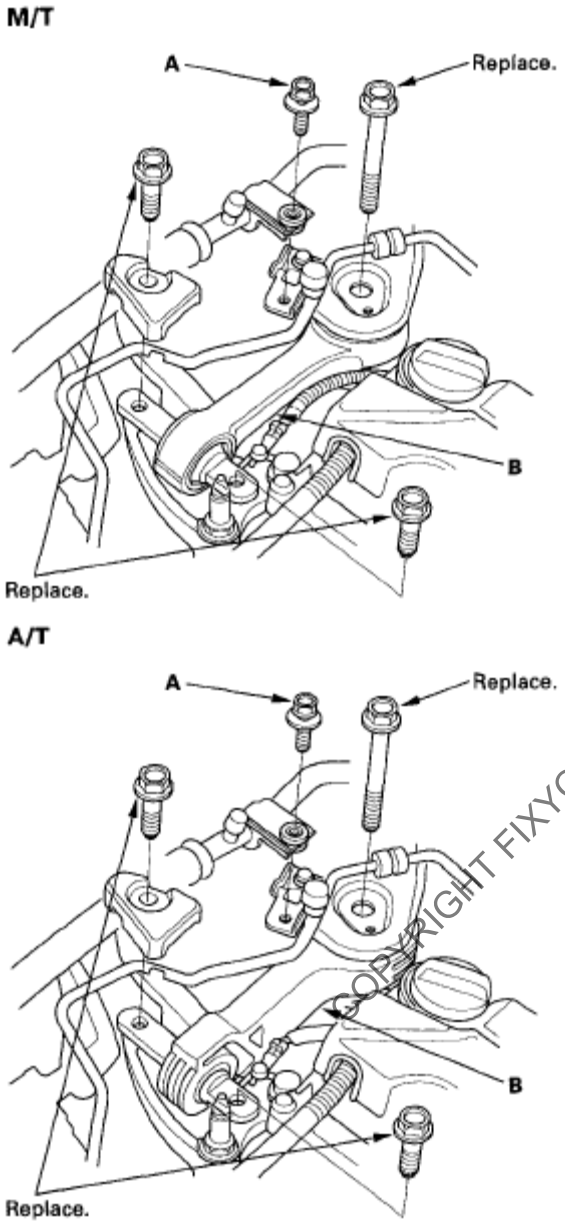

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Fig. 61: Identifying Upper Torque Rod
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the ground cable (A), then remove the side engine mount bracket (B).

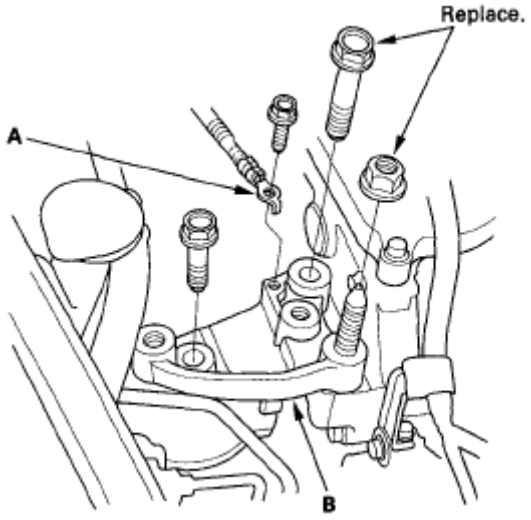

Fig. 62: Identifying Ground Cable And Side Engine Mount Bracket
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4. Remove the side engine mount stiffener (A), then remove the side engine mount (B).

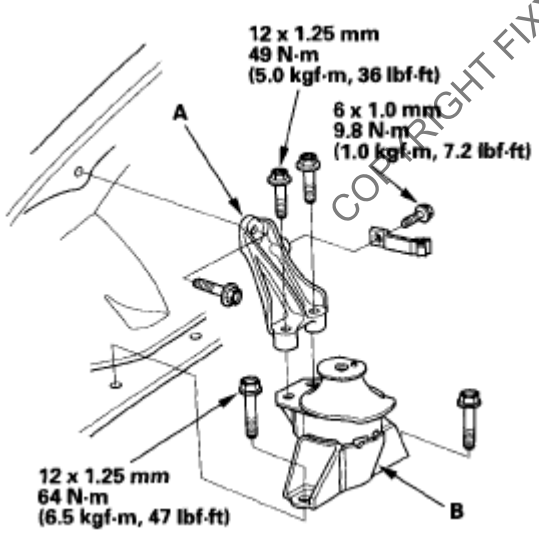

Fig. 63: Identifying Side Engine Mount Stiffener And Side Engine Mount (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the side engine mount, then install the side engine mount stiffener.
6. Install the side engine mount bracket (A), then loosely tighten the new bolt and nut (B). Loosely tighten the bolt (C).

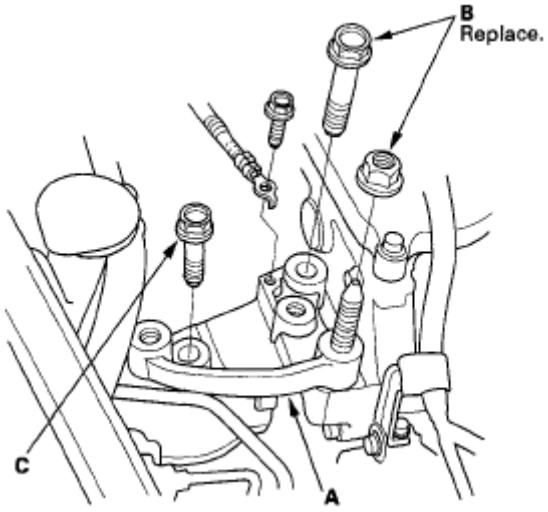

Fig. 64: Identifying Side Engine Mount Bracket
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7. Install the ground cable.
8. Remove the air cleaner assembly (see **THROTTLE BODY CLEANING**).
9. Loosen the transmission mounting bolt and nuts (A).

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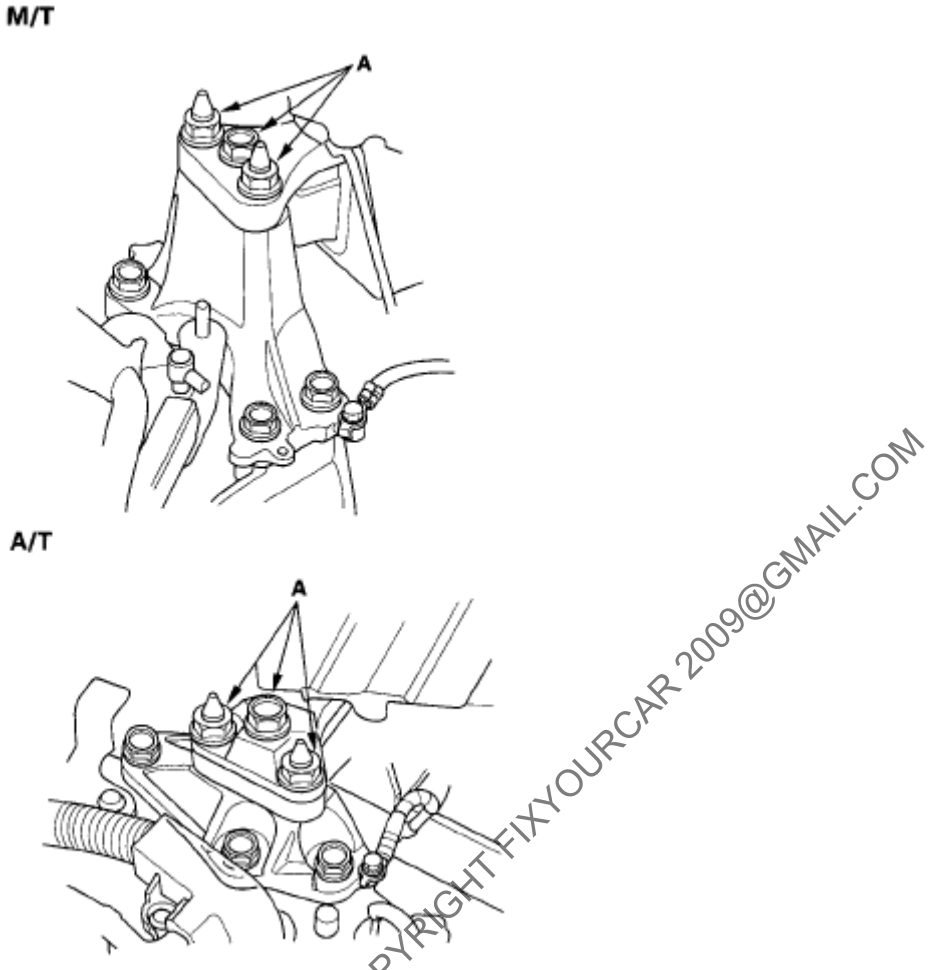

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Fig. 65: Identifying Transmission Mounting Bolt And Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Raise the vehicle on the lift to full height.
11. Loosen the lower torque rod mounting bolt (A).

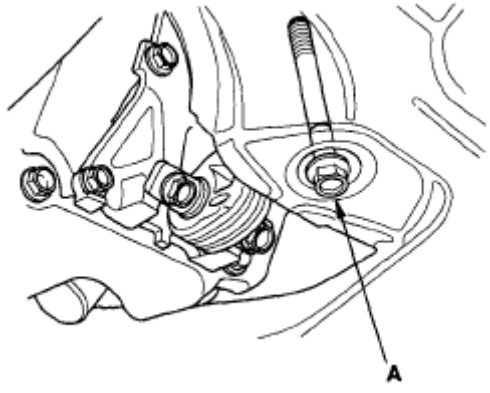

Fig. 66: Identifying Lower Torque Rod Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Lower the vehicle on the lift.
13. Tighten the side engine mount mounting bolts and nut.

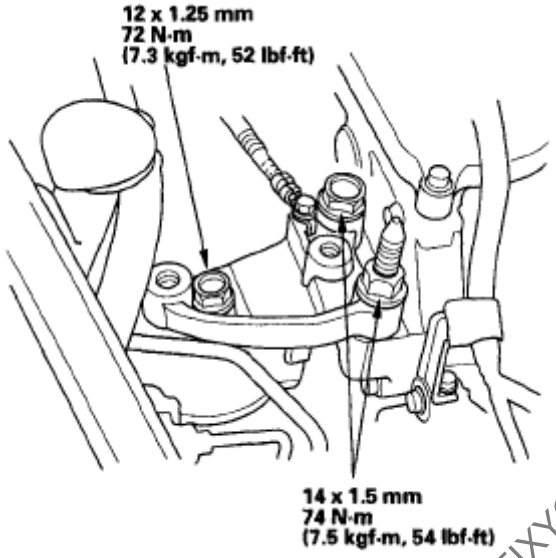

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Fig. 67: Identifying Side Engine Mount Mounting Bolts And Nut (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Tighten the transmission mounting bolt and nuts.

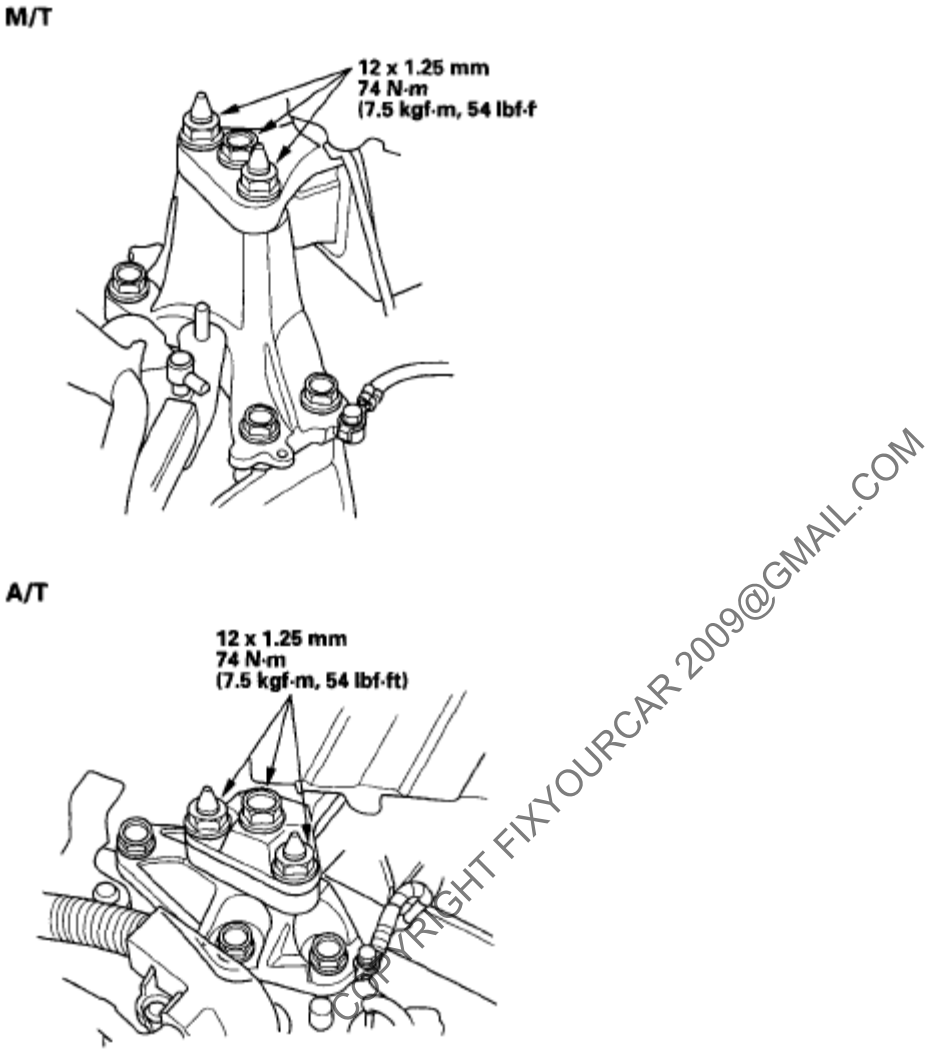

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Fig. 68: Identifying Transmission Mounting Bolt And Nuts (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Raise the vehicle on the lift to full height.
16. Tighten the lower torque rod mounting bolt.

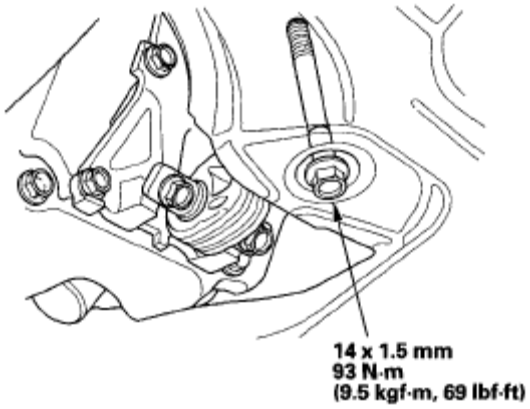

Fig. 69: Identifying Lower Torque Rod Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Lower the vehicle on the lift.
18. Install the air cleaner assembly (see **THROTTLE BODY CLEANING**).
19. Install the upper torque rod (A), then tighten the new upper torque rod mounting bolts in the numbered sequence shown.

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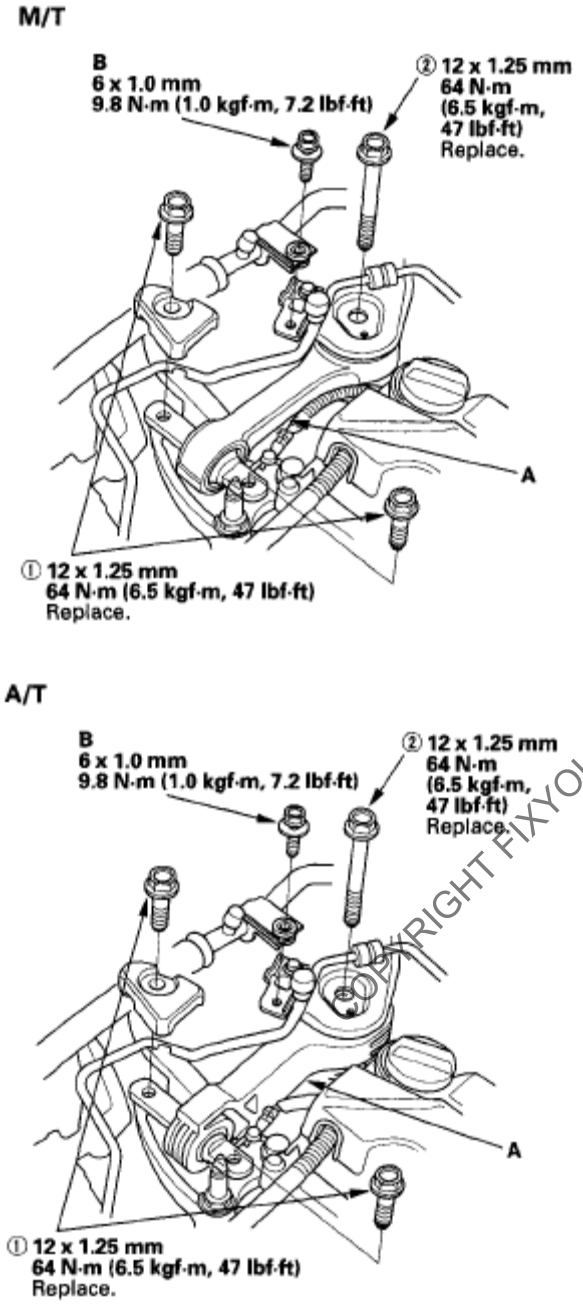

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Fig. 70: Identifying Tightening Sequence For Upper Torque Rod Mounting Bolts (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Install the bolt (B) securing the A/C line.

TRANSMISSION MOUNT REPLACEMENT

1. Loosen the upper torque rod mounting bolt (A).

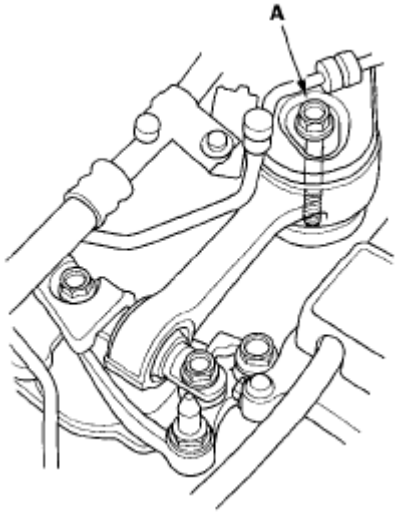

Fig. 71: Identifying Upper Torque Rod Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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2. Remove the air cleaner assembly (see **THROTTLE BODY CLEANING**).
3. Remove the engine control module (ECM)/ powertrain control module (PCM) cover, then remove the three bolts securing the ECM/PCM.
4. Remove the ECM/PCM bracket.
5. Remove the under-hood fuse/relay box from the bracket.
6. Support the transmission with a jack and a wood block under the transmission.
7. Remove the transmission mount stiffener (A), then remove the transmission mount (B).

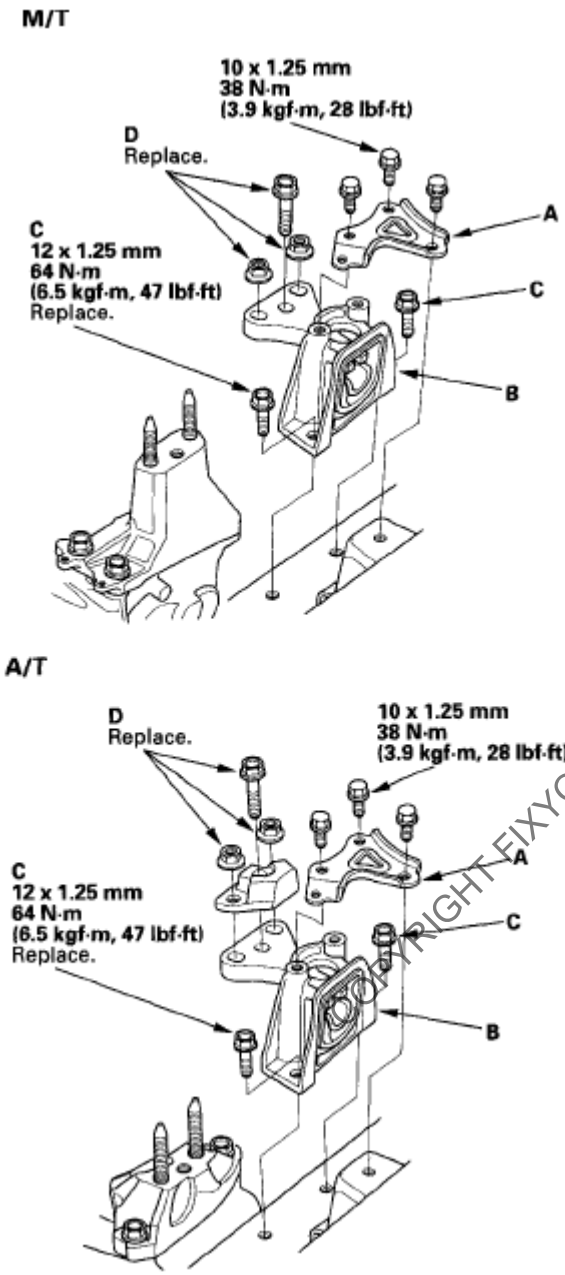

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Fig. 72: Identifying Transmission Mount Stiffener And Transmission Mount (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Install the transmission mount with the new mounting bolts (C), then install the transmission mount stiffener.
9. Loosely tighten the new bolt and nuts (D).
10. Raise the vehicle on the lift to full height.

11. Loosen the lower torque rod mounting bolt (A).

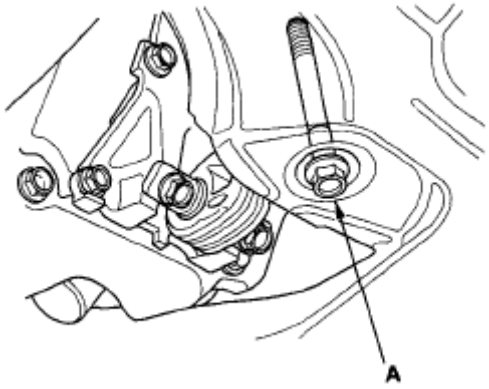

Fig. 73: Identifying Lower Torque Rod Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Lower the vehicle on the lift.
13. Tighten the transmission mounting bolt and nuts.

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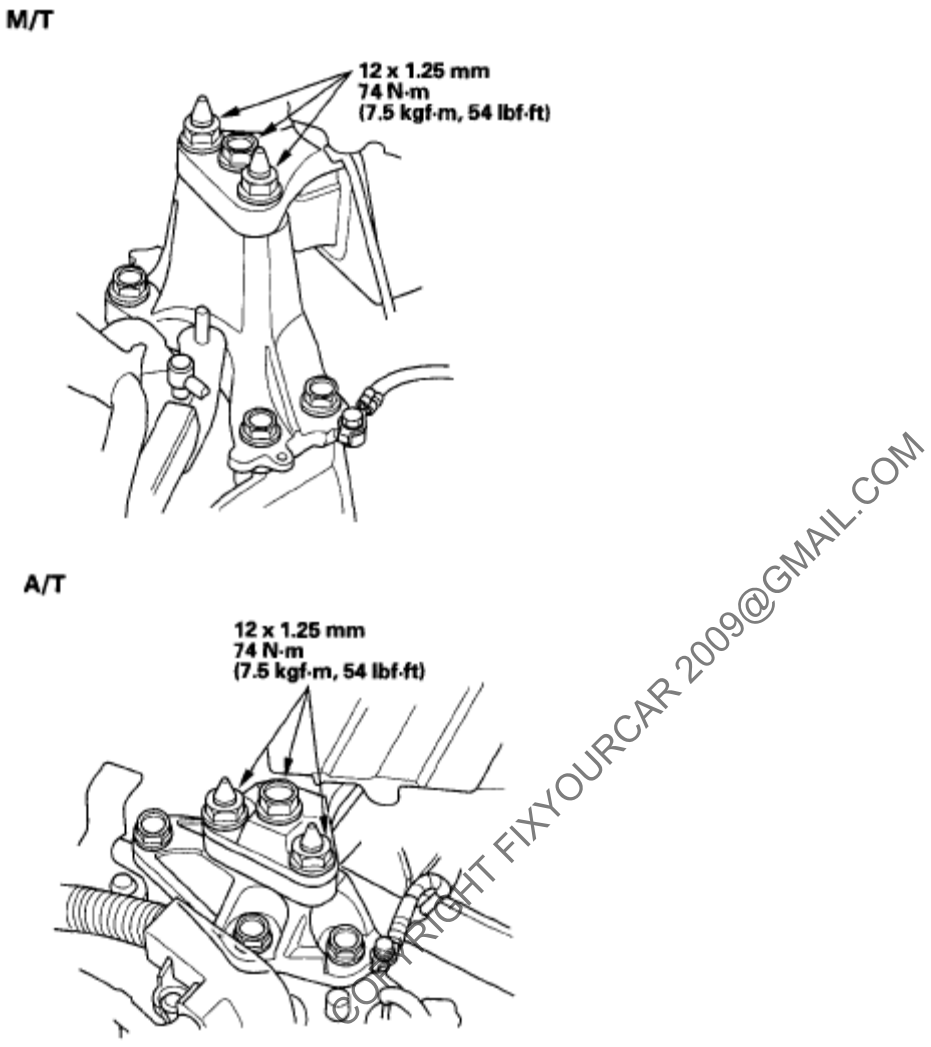

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Fig. 74: Identifying Transmission Mounting Bolt And Nuts (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Raise the vehicle on the lift to full height.
15. Tighten the lower torque rod mounting bolt.

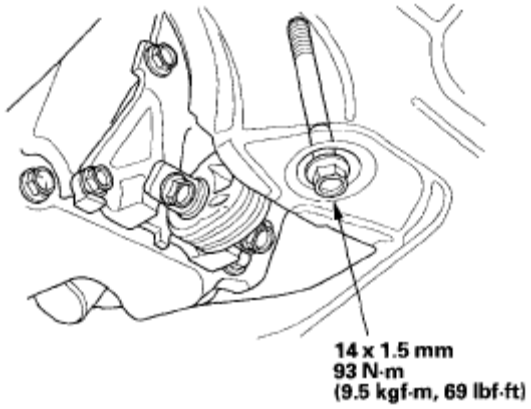

Fig. 75: Identifying Lower Torque Rod Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Lower the vehicle on the lift.
17. Tighten the upper torque rod mounting bolt.

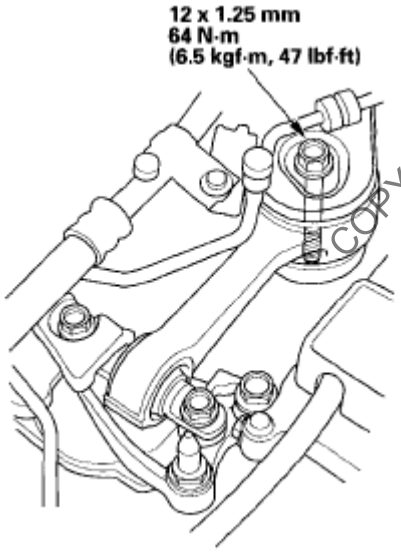

Fig. 76: Identifying Upper Torque Rod Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Install the under-hood fuse/relay box to the bracket.
19. Install the ECM/PCM bracket.
20. Install the ECM/PCM, then install the ECM/PCM cover.

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21. Install the air cleaner assembly (see **THROTTLE BODY CLEANING**).

LOWER TORQUE ROD REPLACEMENT

1. Loosen the upper torque rod mounting bolt (A).

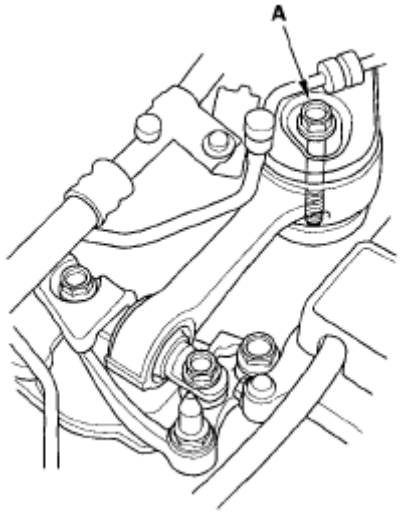

Fig. 77: Identifying Upper Torque Rod Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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2. Raise the vehicle on the lift to full height.
3. Remove the lower torque rod. M/T

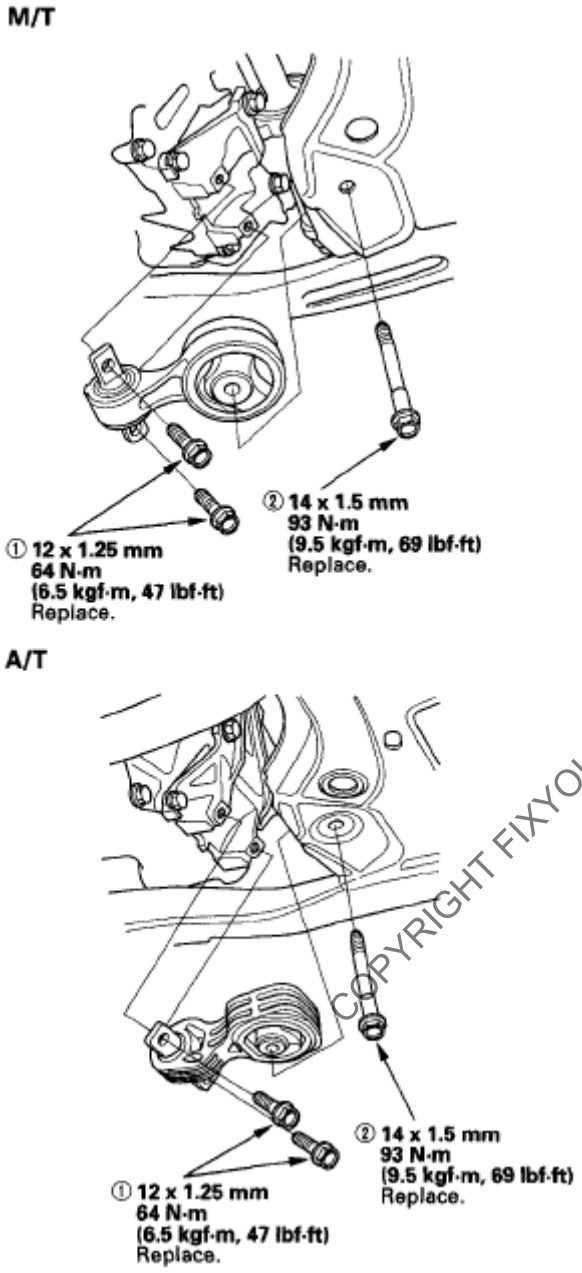

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Fig. 78: Identifying Lower Torque Rod (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the lower torque rod, then tighten the new lower torque rod mounting bolts in the numbered sequence shown.
5. Lower the vehicle on the lift.
6. Tighten the upper torque rod mounting bolt.

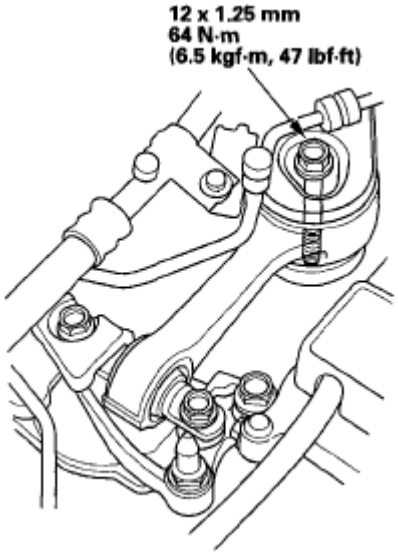

Fig. 79: Identifying Upper Torque Rod Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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UPPER TORQUE ROD REPLACEMENT

1. Remove the bolt (A) securing the A/C line, then remove the upper torque rod (B).

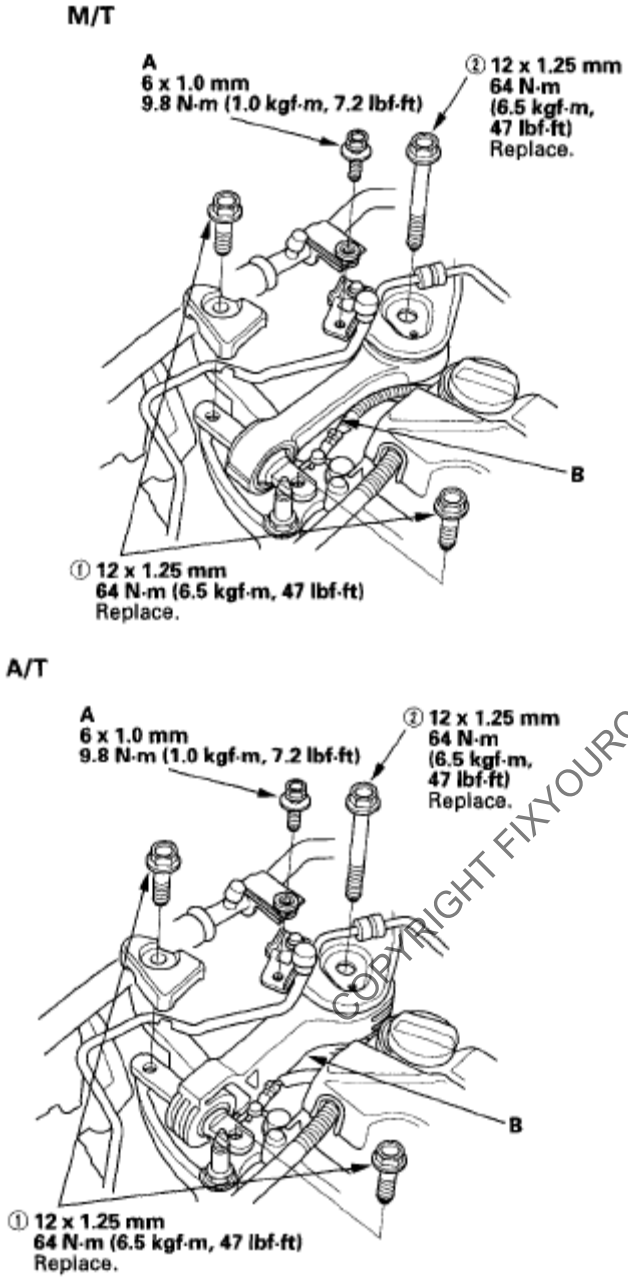

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Fig. 80: Identifying Upper Torque Rod (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the upper torque rod, then tighten the new bolts in the numbered sequence shown.

SIDE ENGINE MOUNT BRACKET REPLACEMENT

1. Support the engine with a jack and a wood block under the oil pan.

2. Remove the bolt (A) securing the A/C line, then remove the upper torque rod (B).

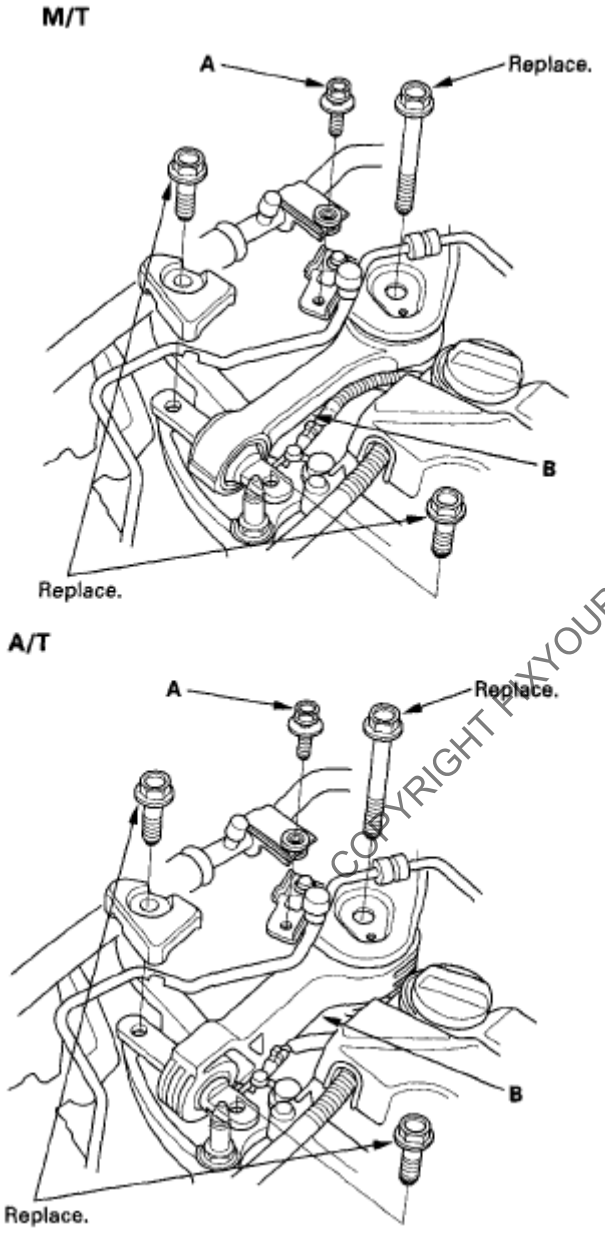

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Fig. 81: Identifying Upper Torque Rod
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Remove the ground cable (A), then remove the side engine mount bracket (B).

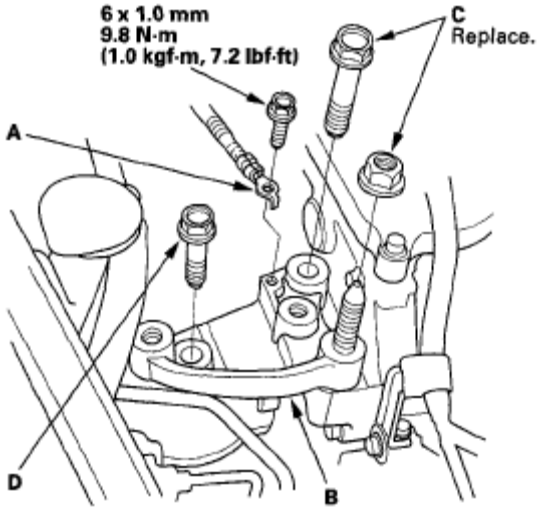

Fig. 82: Identifying Side Engine Mount Bracket And Ground Cable (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the side engine mount bracket, then loosely tighten the new bolt and nut (C), and loosely tighten the bolt (D).
5. Install the ground cable.
6. Remove the air cleaner assembly (see **THROTTLE BODY CLEANING**).
7. Loosen the transmission mounting bolt and nuts (A).

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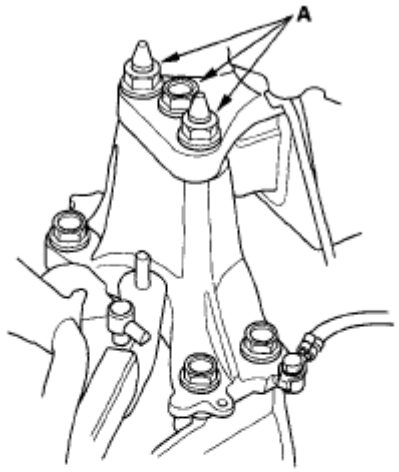
M/T



A/T

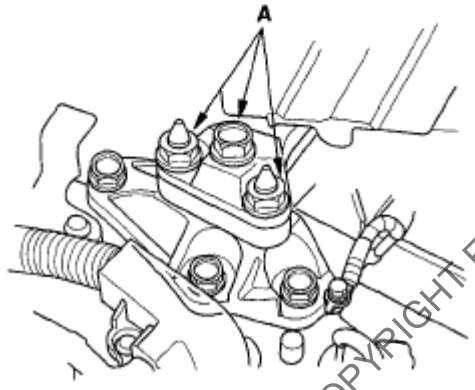


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Fig. 83: Identifying Transmission Mounting Bolt And Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Raise the vehicle on the lift to full height.
9. Loosen the lower torque rod mounting bolt (A).

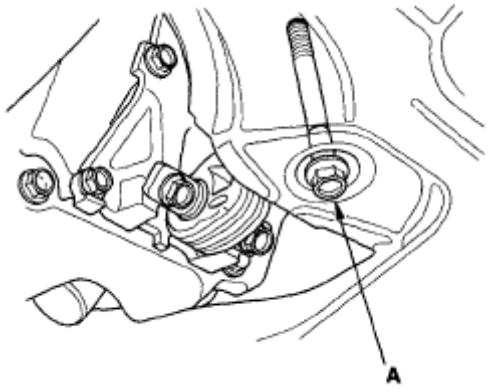

Fig. 84: Identifying Lower Torque Rod Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Lower the vehicle on the lift.
11. Tighten the side engine mount mounting bolts and nut.

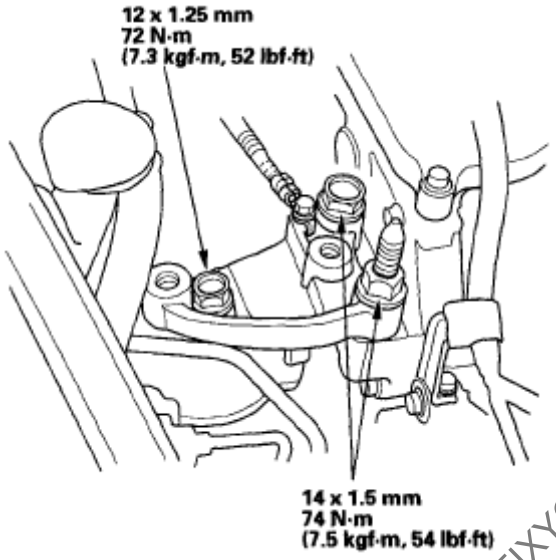

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Fig. 85: Identifying Side Engine Mount Mounting Bolts And Nut (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Tighten the transmission mounting bolt and nuts.

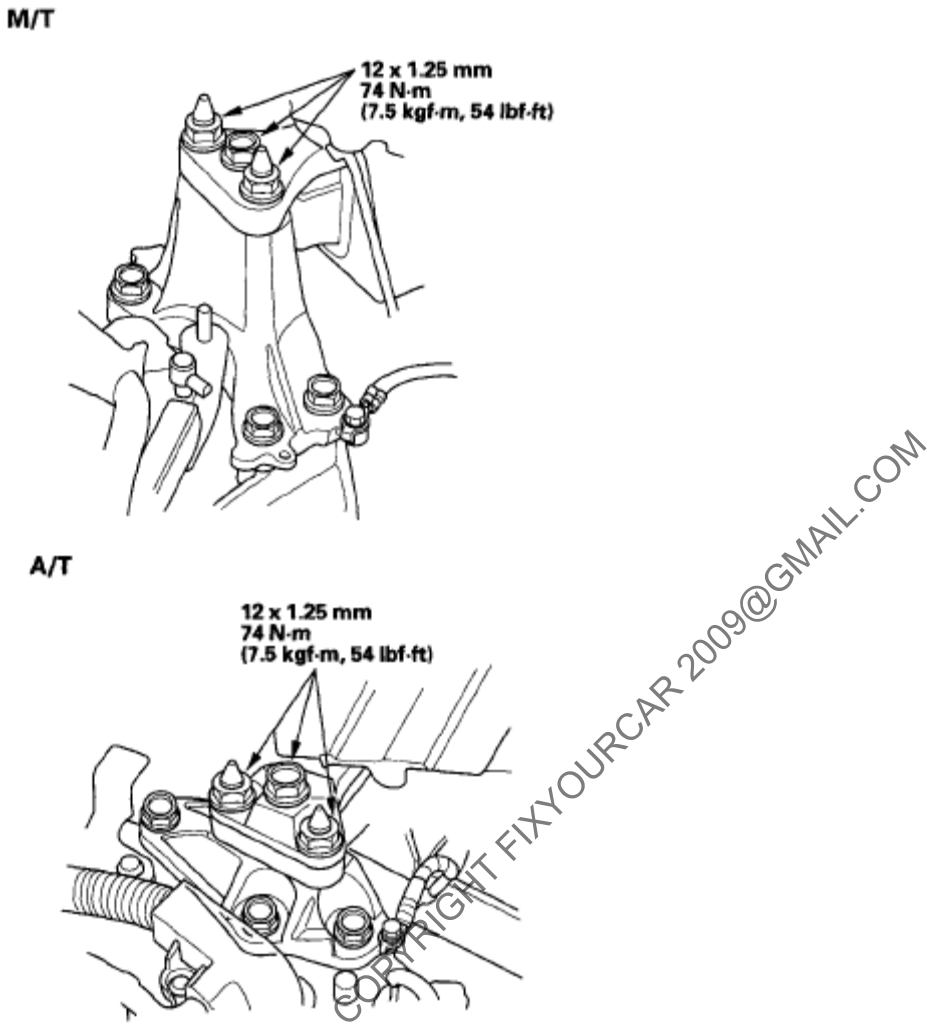

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Fig. 86: Identifying Transmission Mounting Bolt And Nuts (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Raise the vehicle on the lift to full height.
14. Tighten the lower torque rod mounting bolt.

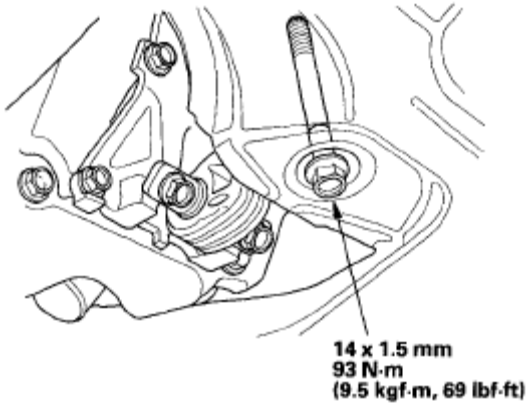

Fig. 87: Identifying Lower Torque Rod Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Lower the vehicle on the lift.
16. Install the air cleaner assembly (see **THROTTLE BODY CLEANING**).
17. Install the upper torque rod (A), then tighten the new upper torque rod mounting bolts in the numbered sequence shown.

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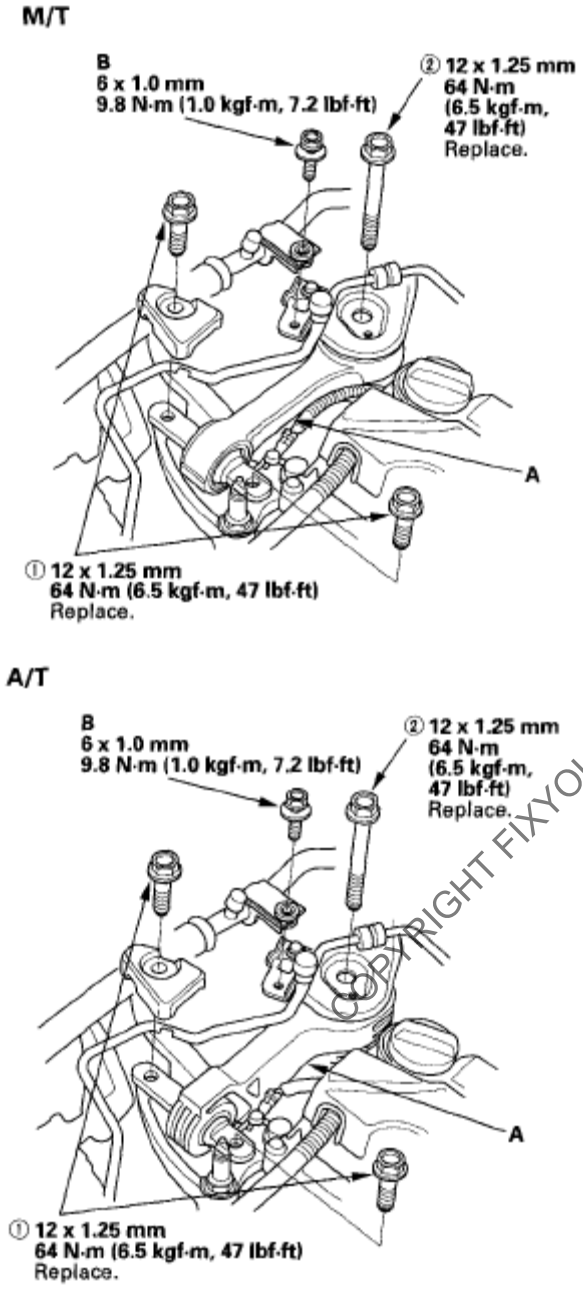

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Fig. 88: Identifying Tightening Sequence For Upper Torque Rod Mounting Bolts (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Install the bolt (B) securing the A/C line.

ENGINE ASSEMBLY (K20Z3)

SPECIAL TOOLS

Ref. No.	Tool Number	Description	Qty
①	07AAK-SNAA120	Engine Hanger Plate	1

①

Fig. 89: Identifying Special Tools
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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ENGINE REMOVAL

Special Tools Required

- Engine hanger plate 07AAK-SNAA120
- Engine hanger adapter VSB02C000015 *
- Front subframe adapter VSB02C000016 *
- 2006 Civic engine hanger VSB02C000025 *
- Engine support hanger, A and Reds AAR-T-12566 *

* : Available through Honda Tool and Equipment Program, 1-888-424-6857

NOTE:

- **Use fender covers to avoid damaging painted surfaces.**
- **To avoid damaging the wiring and terminals, unplug the wiring connectors carefully while holding the connector portion.**
- **Mark all wiring and hoses to avoid misconnection. Also, be sure that they do not contact other wiring or hoses, or interfere with other parts.**

1. Make sure you have the anti-theft code for the audio system and the navigation system (if equipped), then write down the audio presets.
2. Secure the hood in the wide open position (support rod in the lower hole).

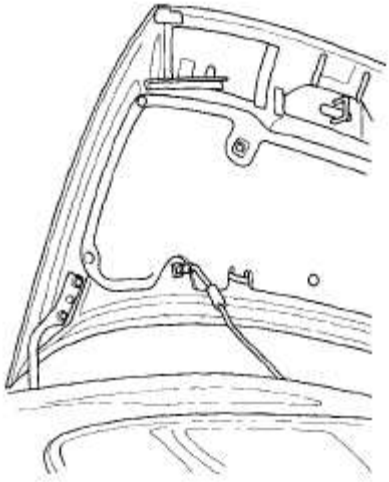

Fig. 90: Identifying Support Rod In Lower Hole
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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3. Relieve the fuel pressure (see **FUEL PRESSURE RELIEVING**).
4. Disconnect the negative cable from the battery first, then disconnect the positive cable.
5. Remove the battery.
6. Remove the air cleaner assembly (see **AIR CLEANER REMOVAL/INSTALLATION**).
7. Remove the under-cowl panel (see **FRONT GRILLE COVER REPLACEMENT**).
8. Disconnect the connector (A), and remove the harness clamp (B), then remove the resonator (C).

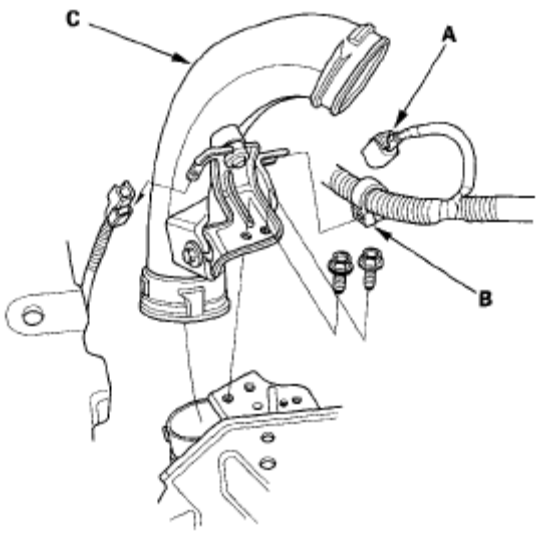

Fig. 91: Identifying Connector And Harness Clamp
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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9. Remove the battery cables (A) from the under-hood fuse/relay box.

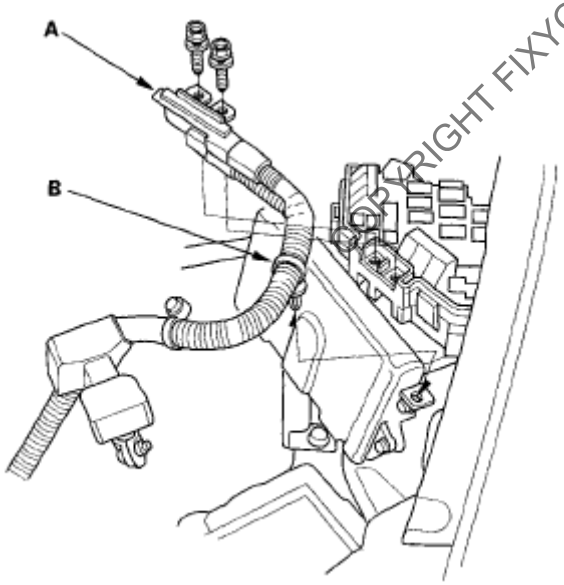

Fig. 92: Identifying Battery Cables And Harness Clamp
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Remove the harness clamp (B).
11. Remove the engine control module (ECM) cover (A), then remove the three bolts (B) securing the ECM.

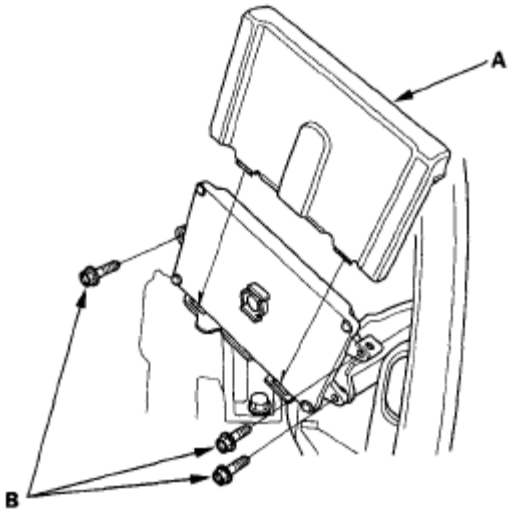

Fig. 93: Identifying Engine Control Module (ECM) Cover And Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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12. Disconnect the ECM connectors (A) and the engine wire harness connector (B).

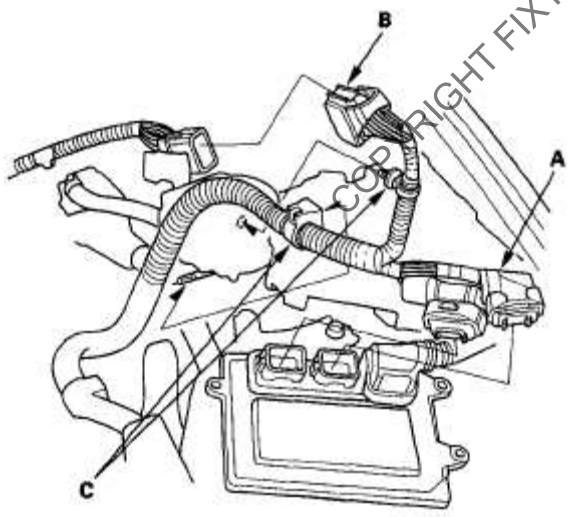

Fig. 94: Identifying ECM Connectors And Engine Wire Harness Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Remove the harness clamps (C).
14. Remove the engine cover.

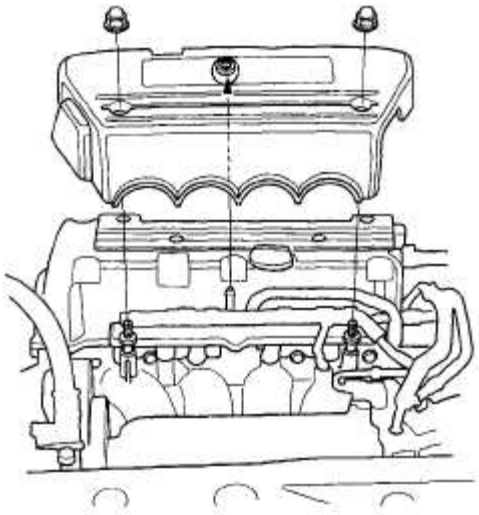

Fig. 95: Identifying Engine Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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15. Remove the evaporative emission (EVAP) canister hose (A) and brake booster vacuum hose (B).

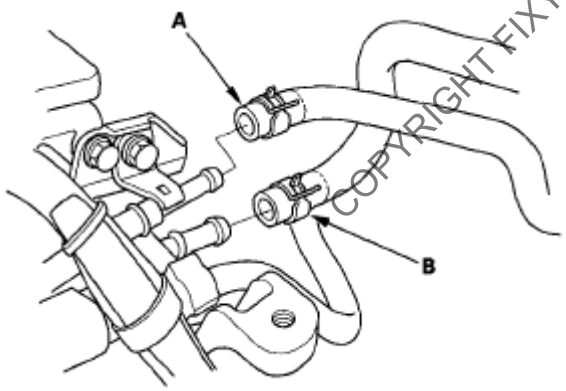

Fig. 96: Identifying Evaporative Emission (EVAP) Canister Hose And Brake Booster Vacuum Hose
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Remove the quick-connect fitting cover (A), then disconnect the fuel feed hose (see **FUEL LINE/QUICK-CONNECT FITTING REMOVAL**).

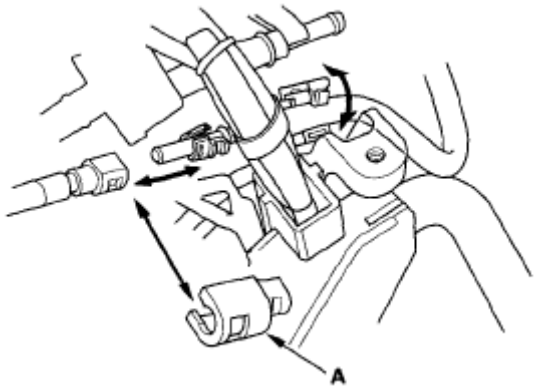

Fig. 97: Identifying Quick-Connect Fitting Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Remove the shift cable (see step 9 on **TRANSMISSION REMOVAL**).
18. Remove the clutch slave cylinder, and clutch line bracket mounting bolt (see step 7 on **TRANSMISSION REMOVAL**).
19. Remove the air cleaner housing bracket.

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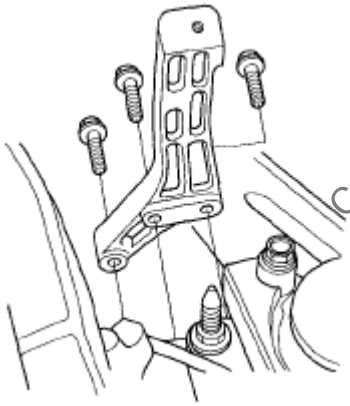

Fig. 98: Identifying Air Cleaner Housing Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Remove the drive belt (see **DRIVE BELT INSPECTION**).
21. Remove the radiator cap.
22. Raise the vehicle on the lift to full height.
23. Remove the front wheels.
24. Remove the splash shield.

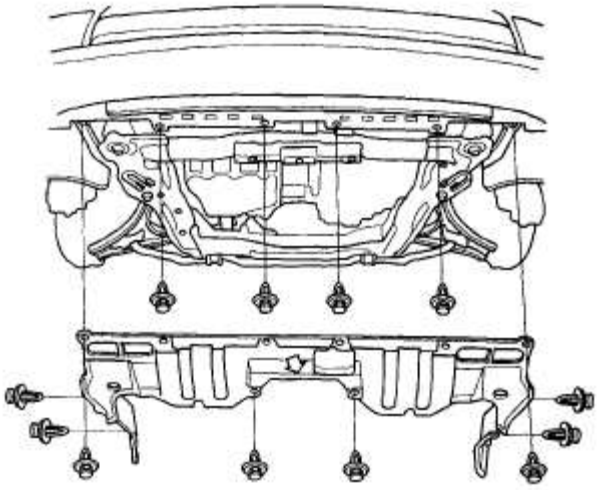

Fig. 99: Identifying Splash Shield
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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25. Loosen the drain plug in the radiator, and drain the engine coolant (see **COOLANT CHECK**).
26. Drain the engine oil (see **OIL PRESSURE TEST**).
27. Drain the transmission fluid (see **TRANSMISSION FLUID INSPECTION AND REPLACEMENT**).
28. Disconnect the air fuel ratio (A/F) sensor connector (A).

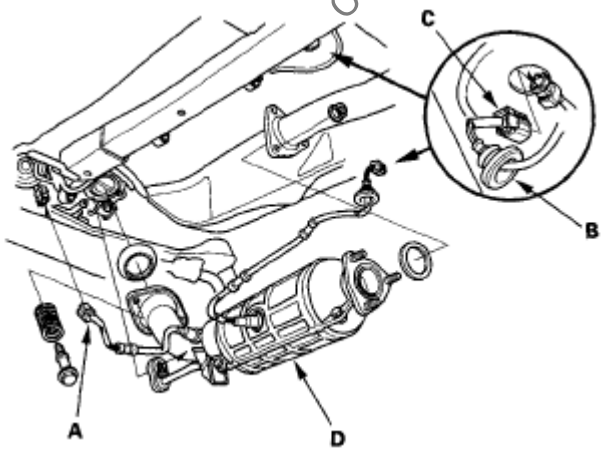

Fig. 100: Identifying (Secondary HO2S) Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

29. Remove the grommet (B), then disconnect the secondary heated oxygen sensor

(secondary HO2S) connector (C).

30. Remove the three way catalytic converter (TWO (D).
31. Separate the stabilizer links (see **STABILIZER LINK REMOVAL/INSTALLATION**).
32. Separate the knuckles from the lower arms (see step 5 on **LOWER ARM REMOVAL/INSTALLATION**).
33. Remove the driveshafts (see step 8 on **DRIVESHAFT REMOVAL**). Coat all precision-finished surfaces with clean engine oil. Tie plastic bags over the driveshaft ends.
34. Remove the steering gearbox bracket (A).

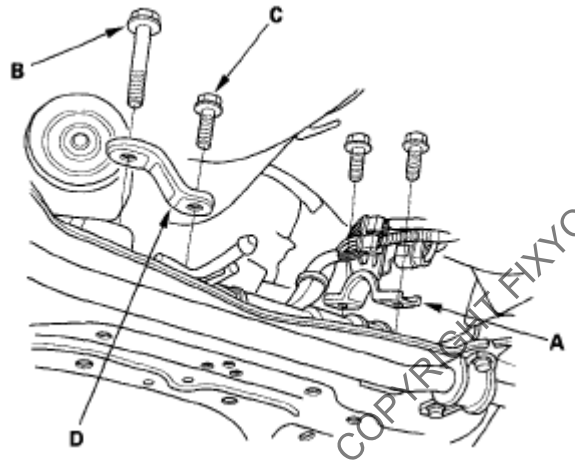

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Fig. 101: Identifying Steering Gearbox Bracket And Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

35. Remove the steering gearbox mounting bolt (B), stiffener mounting bolt (C), and stiffener (D).
36. Remove the steering gearbox mounting bolt (A), stiffener mounting bolt (B), and stiffener (C).

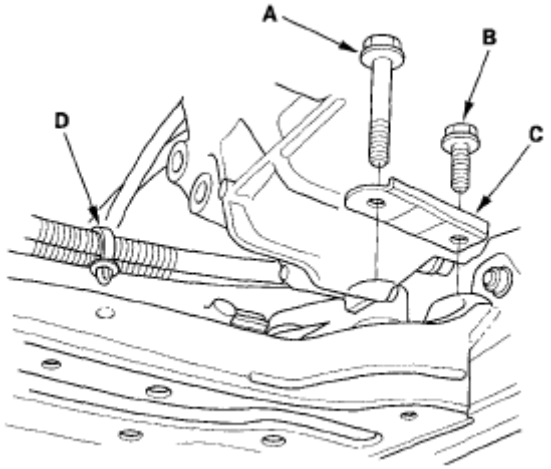

Fig. 102: Identifying Stiffener Mounting Bolt And Stiffener
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37. Remove the harness clamp (D) from the subframe.
38. Disconnect the A/C compressor clutch connector (A), then remove the A/C compressor (B) without disconnecting the A/C hoses.

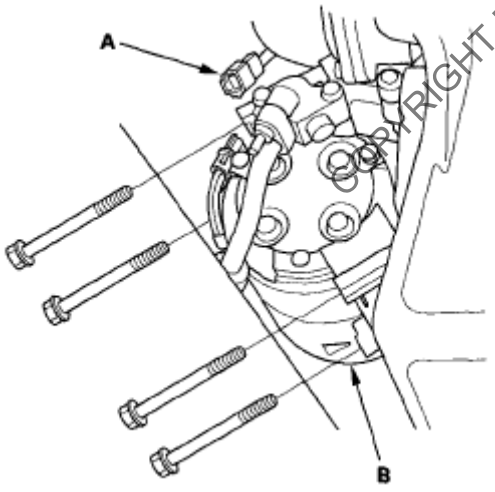

Fig. 103: Identifying A/C Compressor Clutch Connector And A/C Compressor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

39. Lower the vehicle on the lift.
40. Remove the radiator (see **RADIATOR AND FAN REPLACEMENT**).
41. Remove the heater hoses.

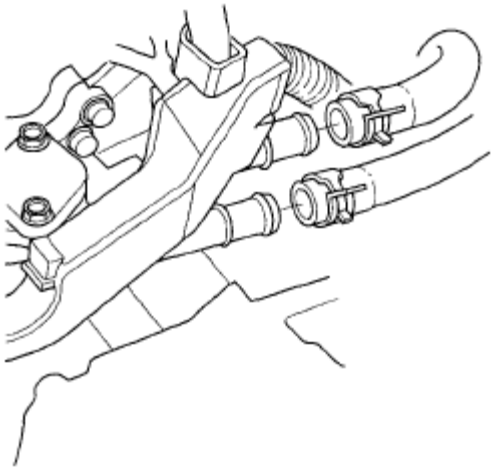

Fig. 104: Identifying Heater Hoses
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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42. Install the bulkhead, and tighten the mounting bolts to 9.8 N.m (1.0 kgf.m, 7.2 lbf.ft).
43. Attach the special tool to the threaded hole in the cylinder head.

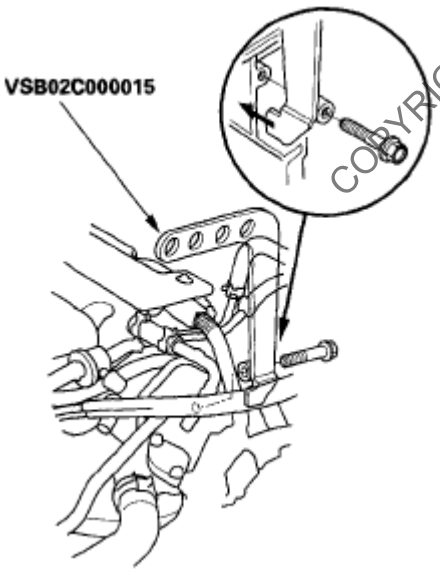

Fig. 105: Identifying Special Tool To Threaded Hole In Cylinder Head
Courtesy of AMERICAN HONDA MOTOR CO., INC.

44. Install the front leg assembly (A), hook (B), and wing nut (C) from an A and Reds engine support hanger (AAR-T-12566) onto the engine hanger. Carefully position the engine hanger on the vehicle, and attach the hook to the forward

hole in the engine hanger adapter (D). Tighten the wing nut by hand to lift and support the engine/transmission.

NOTE: Be careful when working around the windshield.

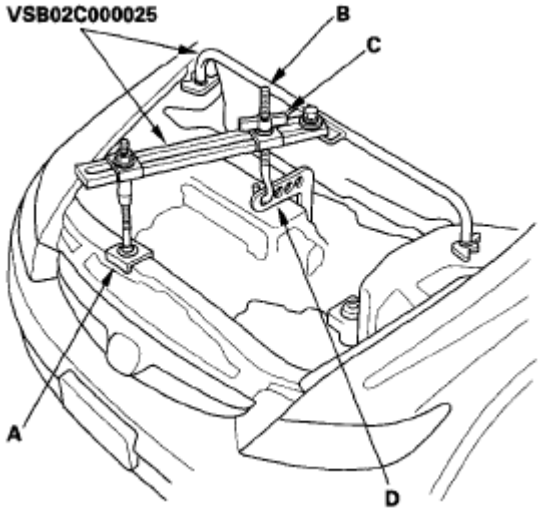

Fig. 106: Identifying Engine Support Hanger
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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45. Raise the vehicle on the lift to full height.
46. Remove the lower torque rod.

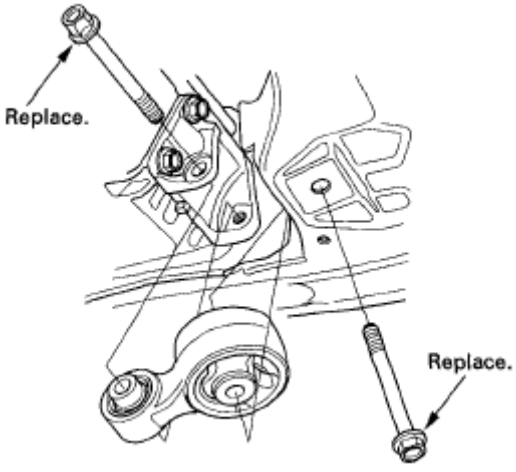

Fig. 107: Identifying Lower Torque Rod
Courtesy of AMERICAN HONDA MOTOR CO., INC.

47. Remove lower radiator hose from the clamp (A), then remove the front mount mounting bolt (B).

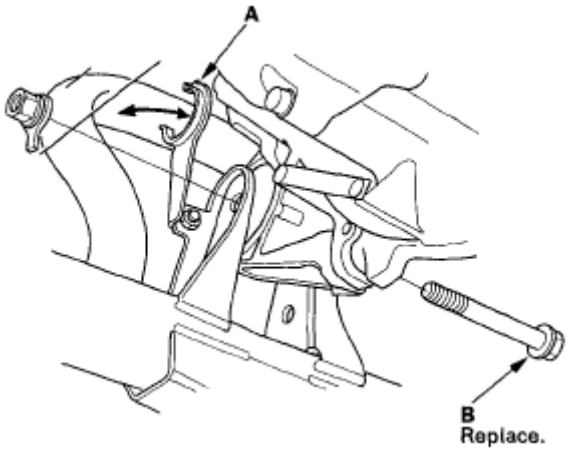

Fig. 108: Identifying Lower Radiator Hose Clamp And Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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48. Note the reference marks (A) on both sides of the front subframe that line up with the body (B).

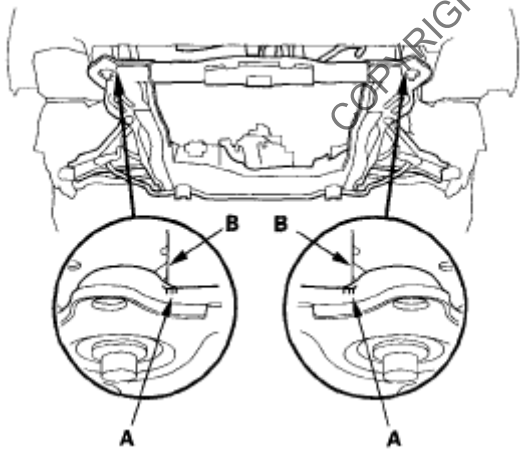

Fig. 109: Identifying Marks On Both Sides Of Front Subframe
Courtesy of AMERICAN HONDA MOTOR CO., INC.

49. Loosen the front subframe body mount bracket mounting bolts (A) on both side.

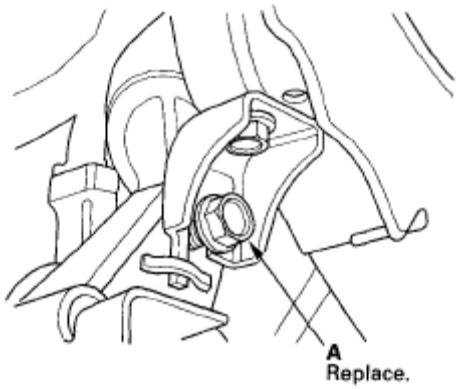

Fig. 110: Identifying Front Subframe Body Mount Bracket Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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50. Attach the front subframe adapter (A) to the front subframe and hang the belt of the front subframe adapter over the front of the front subframe, then secure the belt with its stop.

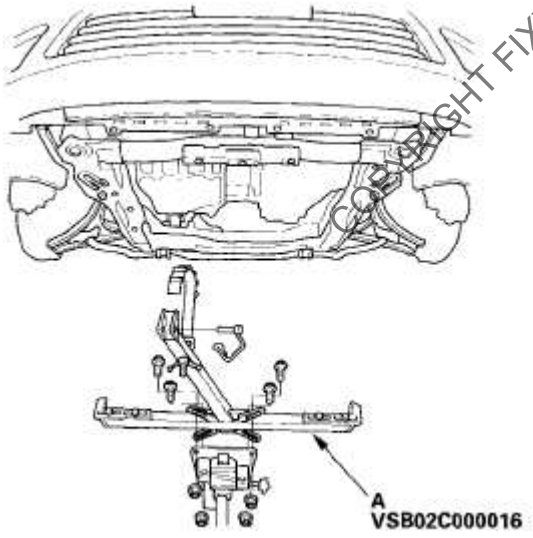

Fig. 111: Identifying Front Subframe Adapter (Special Tools)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

51. Raise the jack and line up the slots in the arms with the bolt holes on the corner of the jack base, then attach them with bolts securely.
52. Remove the front subframe.

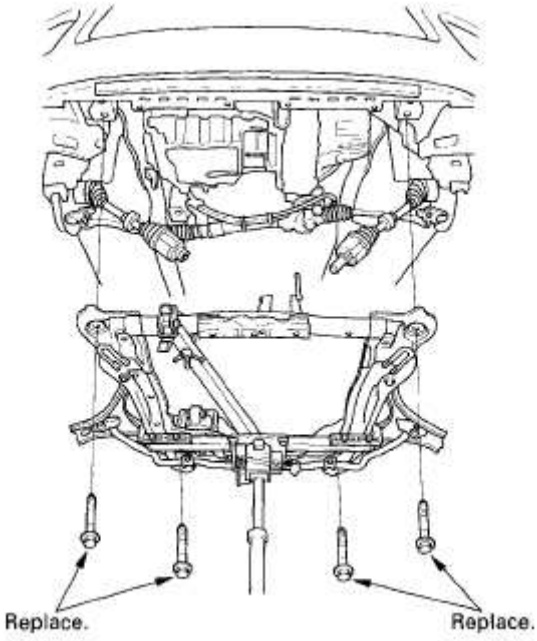

Fig. 112: Identifying Front Subframe And Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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53. Lower the vehicle on the lift.
54. Remove the idler pulley base (see step 2 on **DRIVE BELT AUTO-TENSIONER REMOVAL/INSTALLATION**).
55. Install the special tool.

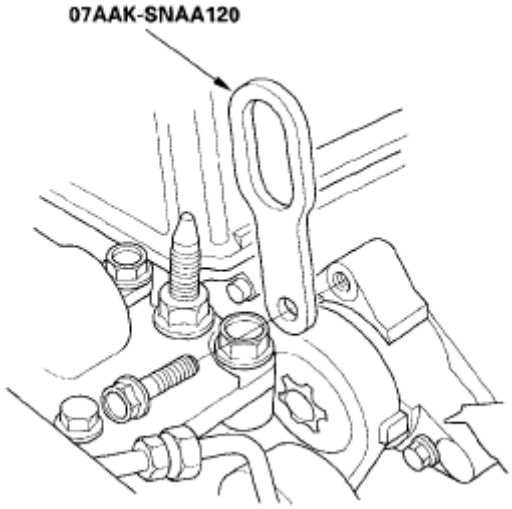

Fig. 113: Identifying Special Tool
Courtesy of AMERICAN HONDA MOTOR CO., INC.

56. Attach a chain hoist (A) to the special tool (B), and the transmission hook (C). Lift up on the engine/transmission until it's securely supported by the chain hoist, and remove the engine hanger.

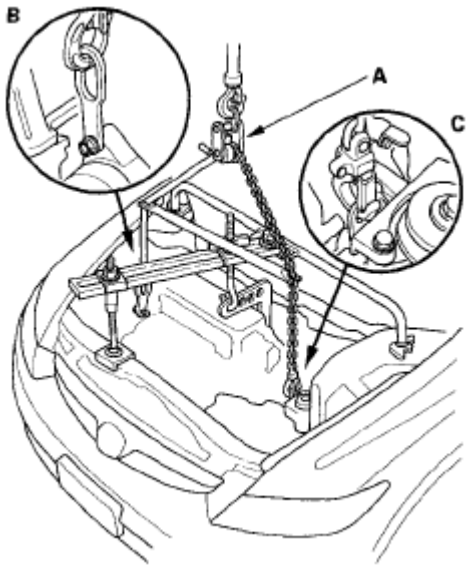

Fig. 114: Lifting Up On Engine/ Transmission
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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57. Remove the side engine mount bracket mounting bolt and nut.

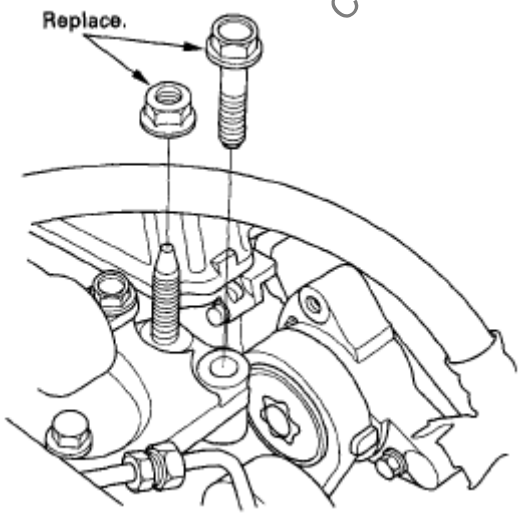

Fig. 115: Identifying Side Engine Mount Bracket Mounting Bolt And Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

58. Remove the transmission mount bracket mounting bolt and nuts.

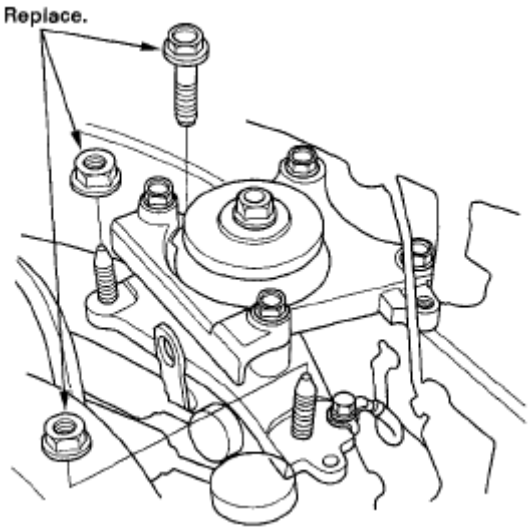

Fig. 116: Identifying Transmission Mount Bracket Mounting Bolt And Nuts
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59. Check that the engine/transmission is completely free of vacuum hoses, fuel and coolant hoses, and electrical wiring.
60. Slowly lower the engine/transmission about 150 mm (6 in.). Check once again that all hoses and electrical wiring are disconnected and free from the engine/transmission, then lower it all the way.
61. Disconnect the chain hoist from the engine/transmission.
62. Raise the vehicle all the way on the hoist, and remove the engine/transmission from under the vehicle.

ENGINE INSTALLATION

Special Tools Required

- Engine hanger plate 07AAK-SNAA120
- Engine hanger adapter VSB02C000015 *
- Front subframe adapter VSB02C000016 *
- 2006 Civic engine hanger VSB02C000025 *

- Engine support hanger, A and Reds AAR-T-12566 *

  * : Available through Honda Tool and Equipment Program, 1-888-424-6857

1. Install the accessory brackets and tighten their bolts to the specified torques.

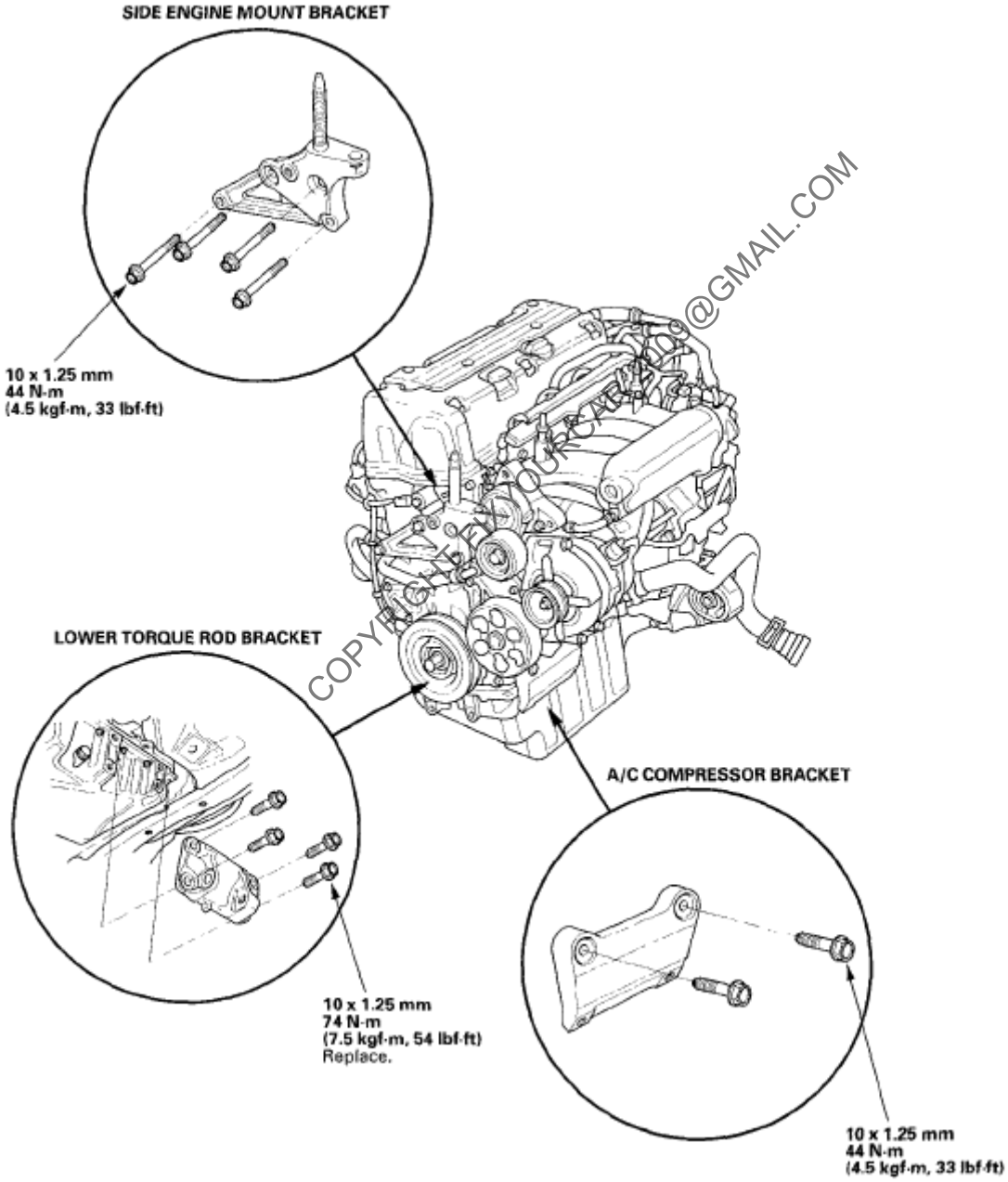

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Fig. 117: Identifying Engine Brackets (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Raise the vehicle on the hoist, and position the engine/transmission under the vehicle. Lower the vehicle, and attach the special tool and chain hoist to the engine, then lift the engine into position in the vehicle.

NOTE: Reinstall the mounting bolts/support nuts in the sequence given in the following steps. Failure to follow this sequence may cause excessive noise and vibration, and reduce engine mount life.

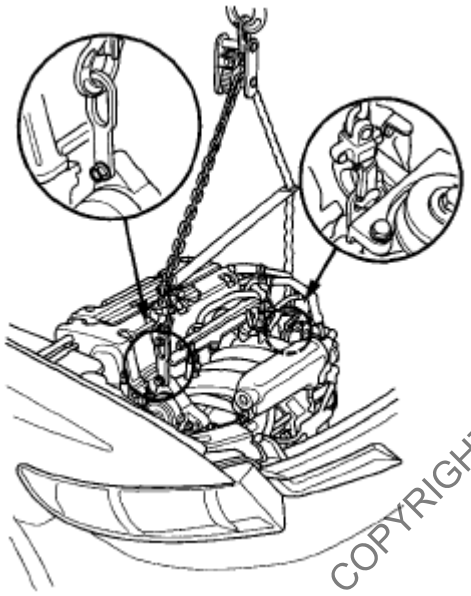

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Fig. 118: Identifying Mounting Bolts/Support Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Attach the special tool to the threaded hole in the cylinder head.

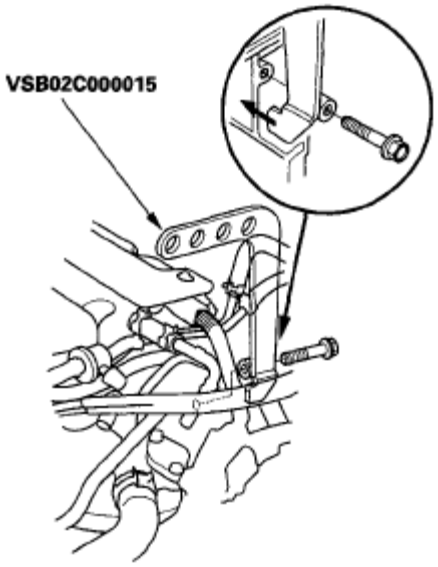

Fig. 119: Identifying Special Tool To Threaded Hole In Cylinder Head
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the front leg assembly (A), hook (B), and wing nut (C) from an A and Reds engine support hanger (AAR-T-12566) onto the engine hanger. Carefully position the engine hanger on the vehicle, and attach the hook to the forward hole in the engine hanger adapter (D). Tighten the wing nut by hand to lift and support the engine/transmission.

NOTE: Be careful when working around the windshield.

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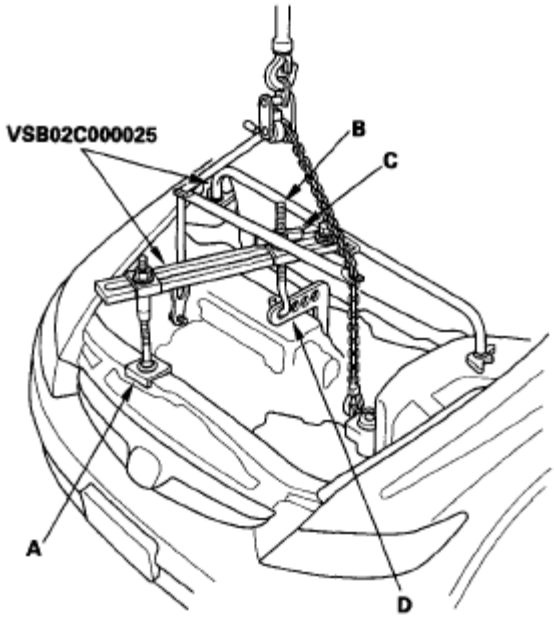

Fig. 120: Identifying Engine Hanger Adapter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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5. Loosen the upper torque rod mounting bolt (A).

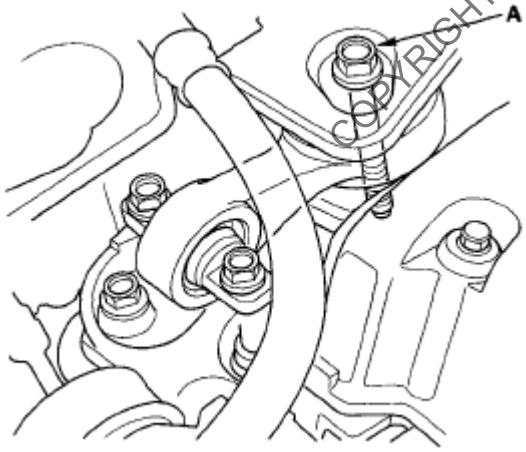

Fig. 121: Identifying Upper Torque Rod Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Tighten the new side engine mount bracket mounting bolt and nut.

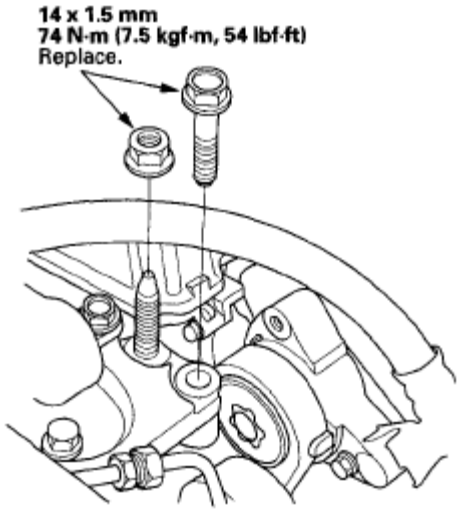

Fig. 122: Identifying Side Engine Mount Bracket Mounting Bolt And Nut (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Tighten the new transmission mounting bolt and nuts.

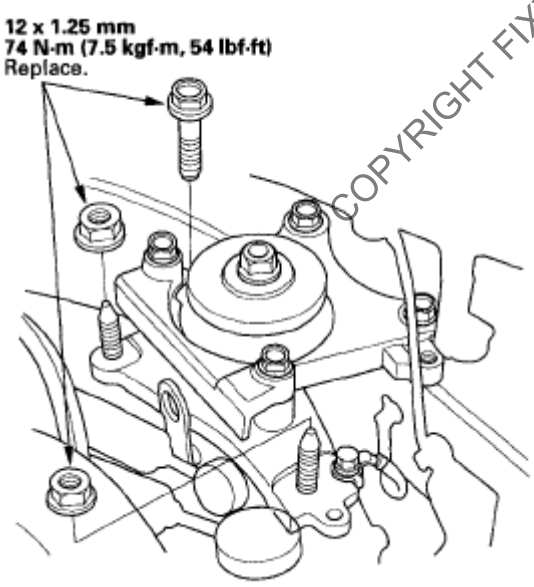

Fig. 123: Identifying Transmission Mounting Bolt And Nuts (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the chain hoist.
9. Remove the special tool.

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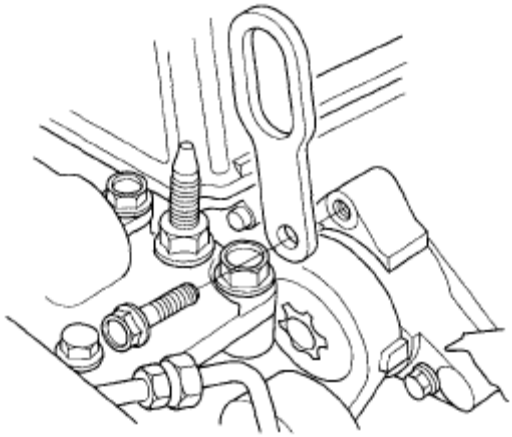

Fig. 124: Identifying Special Tool
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10. Raise the vehicle on the lift.
11. 11 Set the front subframe adapter (A) to the front subframe and hang the belt of the front subframe adapter over the front of the subframe, then secure the belt with its stop.

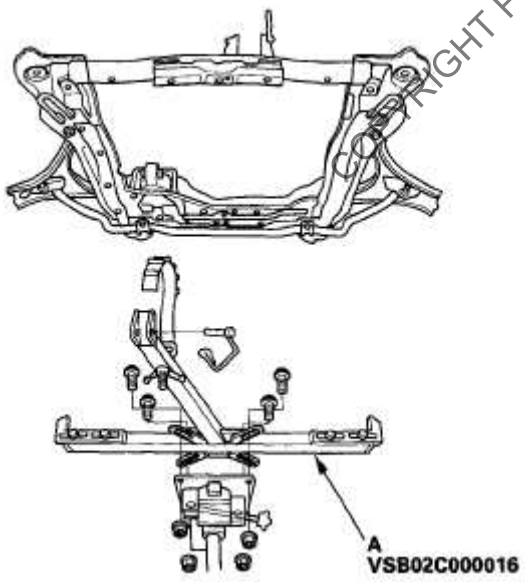

Fig. 125: Identifying Front Subframe Adapter
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Line up the slots in the arms with the bolt holes on the corner of the jack base, and tighten the bolts, then lift the front subframe up to the body.

13. Loosely install the new front subframe mounting bolts.

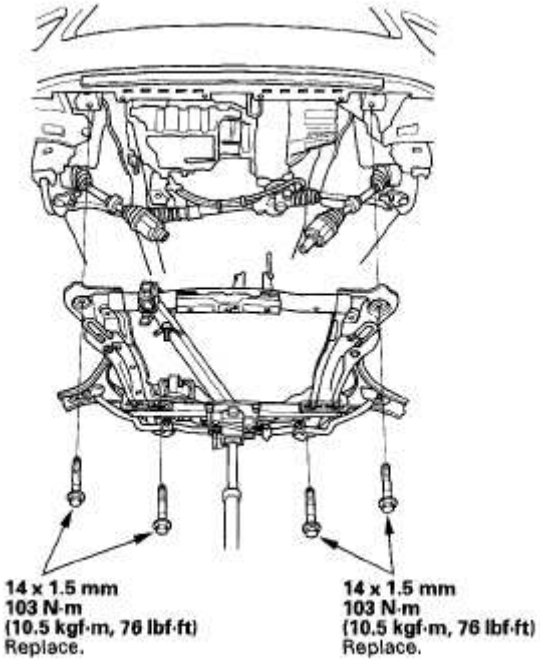

Fig. 126: Identifying Front Subframe Mounting Bolts (With Torque Specifications)
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14. Align the front subframe reference marks (A) to the body (B), as noted during removal. Tighten the bolts on the front subframe to the specified torque.

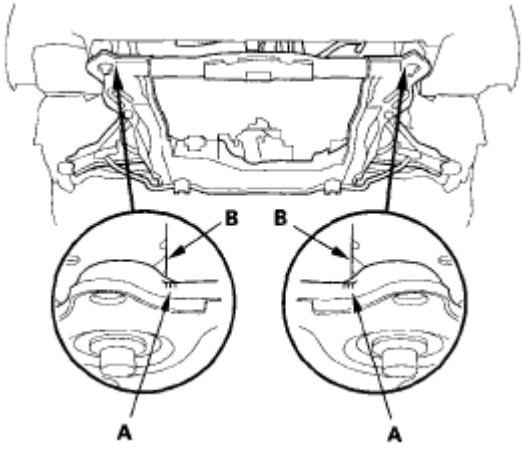

Fig. 127: Identifying Front Subframe Reference Marks To Body
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Remove the jack and front subframe adapter.
16. Tighten the new front subframe body mount bracket mounting bolts on both side.

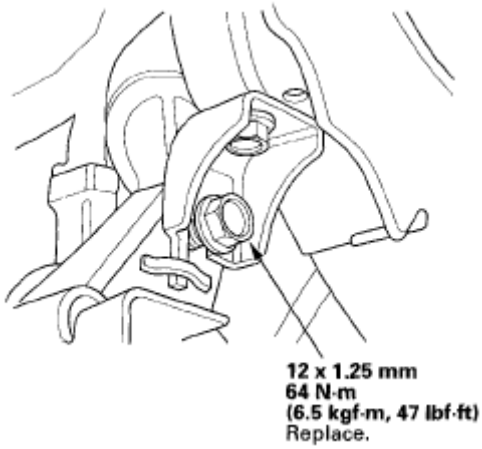

Fig. 128: Identifying Front Subframe Body Mount Bracket Mounting Bolts (With Torque Specifications)
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17. Install the lower torque rod, then tighten the new lower torque rod mounting bolts in the numbered sequence shown.

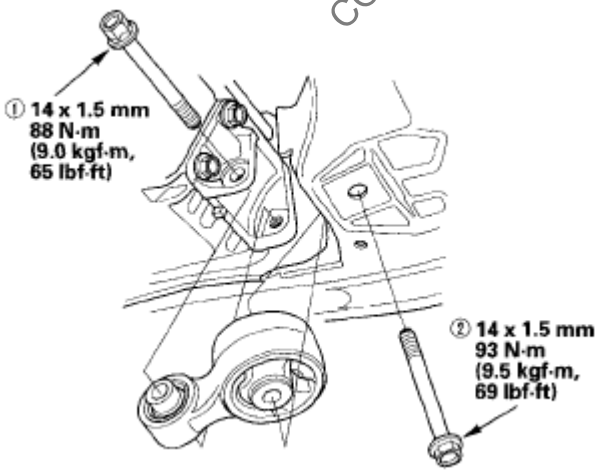

Fig. 129: Identifying Tightening Sequence For Lower Torque Rod Mounting Bolts (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

18. Loosely tighten the new front mount mounting bolt (A), then install the lower radiator hose to the clamp (B).

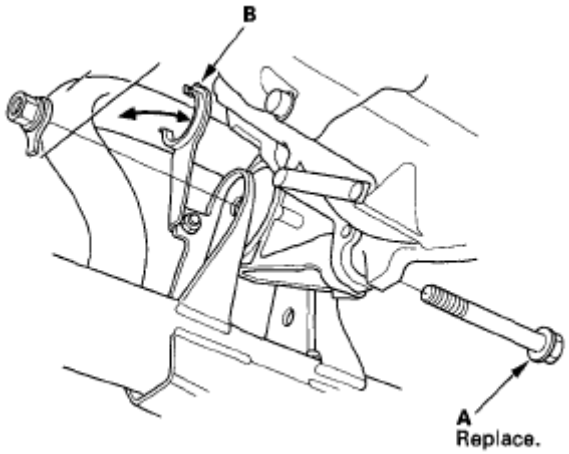

Fig. 130: Identifying Front Mount Mounting Bolt And Lower Radiator Hose Clamp
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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19. Lower the vehicle on the lift.
20. Remove the special tools from the engine and vehicle.
21. Tighten the upper torque rod mounting bolt.

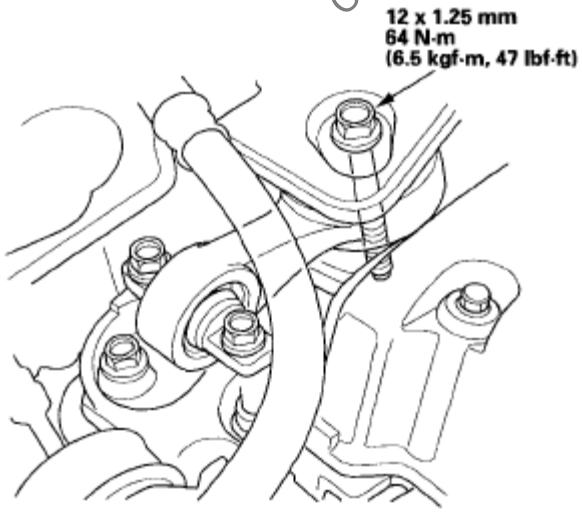

Fig. 131: Identifying Upper Torque Rod Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

22. Raise the vehicle on the lift to full height.
23. Tighten the front mount mounting bolt.

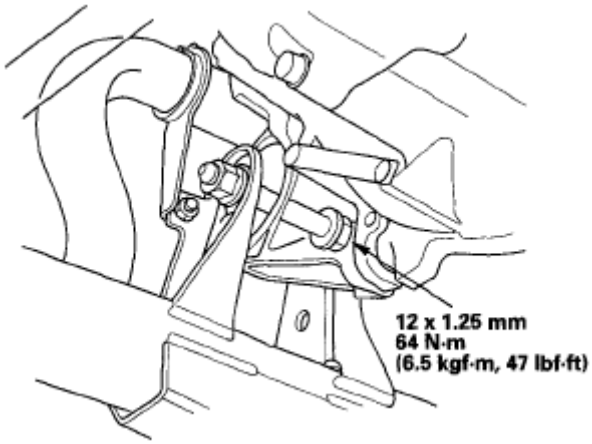

Fig. 132: Identifying Front Mount Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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24. Install the A/C compressor (A), then connect the A/C compressor clutch connector (B).

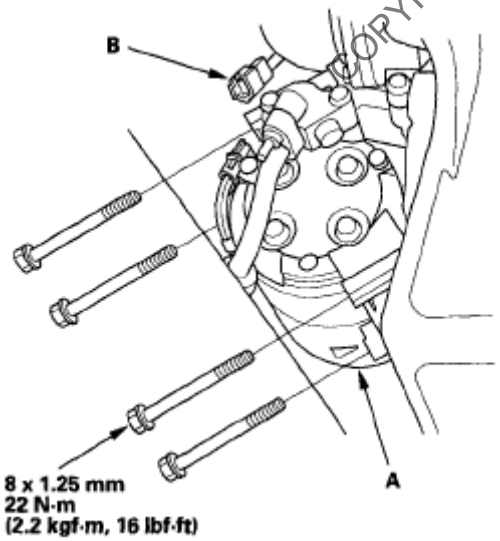

Fig. 133: Identifying A/C Compressor And Clutch Connector (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Install the stiffener (A), then tighten the steering gearbox mounting bolt (B) and stiffener mounting bolt(C).

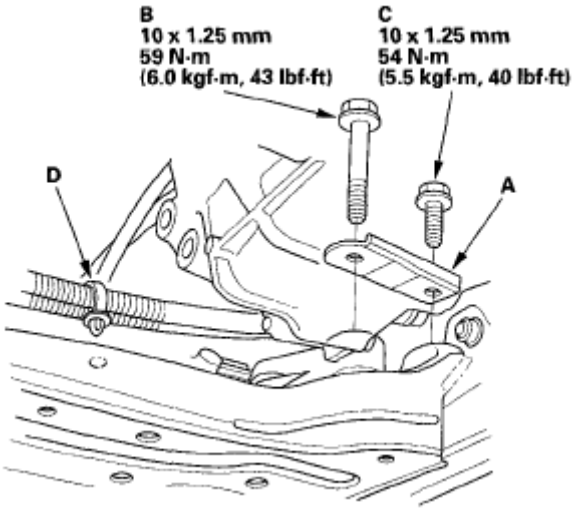

Fig. 134: Identifying Steering Gearbox Mounting Bolt (With Torque Specifications)
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26. Install the harness clamp (D) to the subframe.
27. Install the steering gearbox bracket (A).

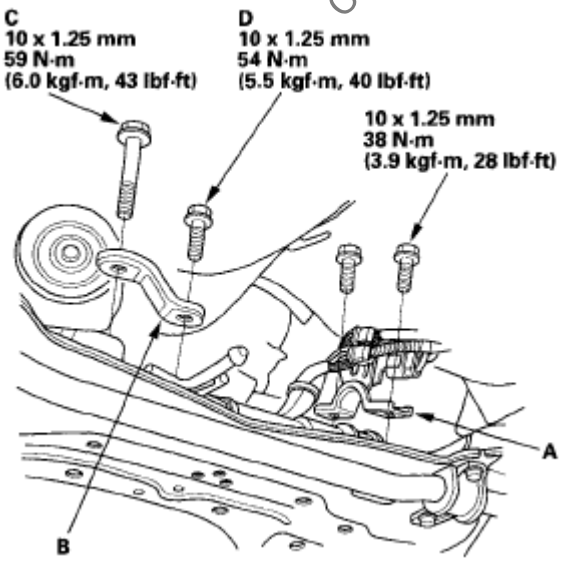

Fig. 135: Identifying Steering Gearbox Bracket (With Torque Specifications)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

28. Install the stiffener (B), then tighten the steering gearbox mounting bolt (C) and stiffener mounting bolt(D).
29. Install a new set ring on the end of each driveshaft, then install the driveshafts. Make sure each ring "clicks" into place in the differential and intermediate shaft.
30. Connect the lower arms to the knuckles (see step 5 on **LOWER ARM REMOVAL/INSTALLATION**).
31. Connect the stabilizer links (see **STABILIZER LINK REMOVAL/INSTALLATION**).
32. Install the three way catalytic converter (TWC) (A). Use new gaskets (B) and new self-locking nuts (C).

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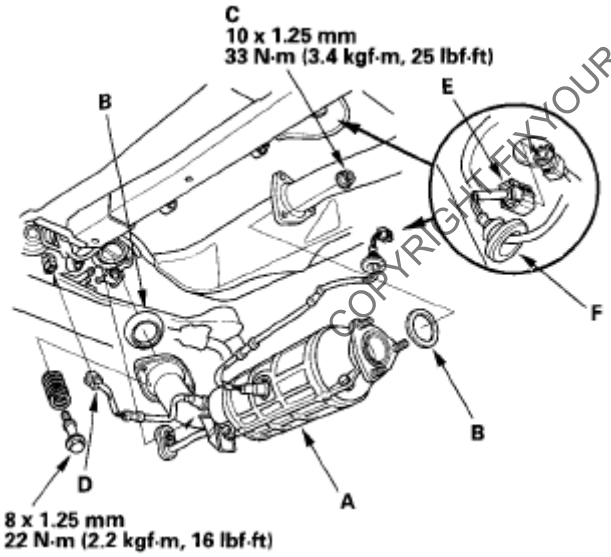

Fig. 136: Identifying (Secondary HO2S) Connector (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

33. Connect the air fuel ratio (A/F) sensor connector (D).
34. Connect the secondary heated oxygen sensor (secondary HO2S) connector (E), then install the grommet (F).
35. Install the splash shield.

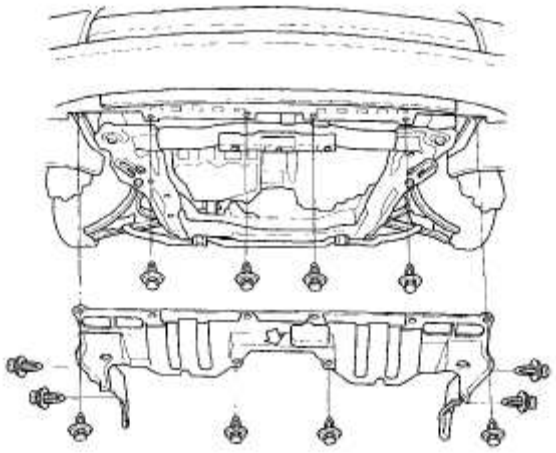

Fig. 137: Identifying Splash Shield
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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36. Lower the vehicle on the lift.
37. Install the heater hoses.

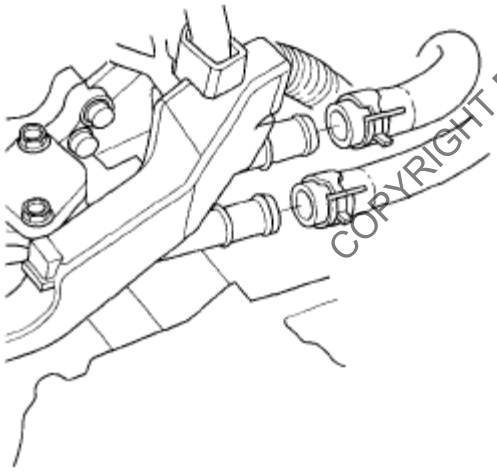

Fig. 138: Identifying Heater Hoses
Courtesy of AMERICAN HONDA MOTOR CO., INC.

38. Install the radiator (see **RADIATOR AND FAN REPLACEMENT**).
39. Install the idler pulley base (see **DRIVE BELT AUTO-TENSIONER REMOVAL/INSTALLATION**).
40. Install the drive belt (see **DRIVE BELT INSPECTION**).
41. Install the air cleaner housing bracket.

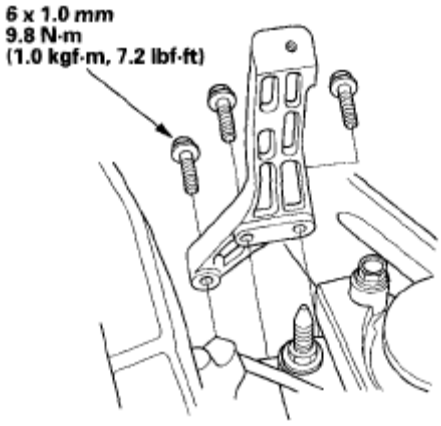

Fig. 139: Identifying Air Cleaner Housing Bracket
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42. Install the shift cable (see step 34 on **TRANSMISSION INSTALLATION**).
43. Install the clutch slave cylinder, and clutch line bracket mounting bolt (see step 37 on **TRANSMISSION INSTALLATION**).
44. Connect the fuel feed hose (see **FUEL LINE/QUICK-CONNECT FITTING INSTALLATION**), then install the quick-connect fitting cover (A).

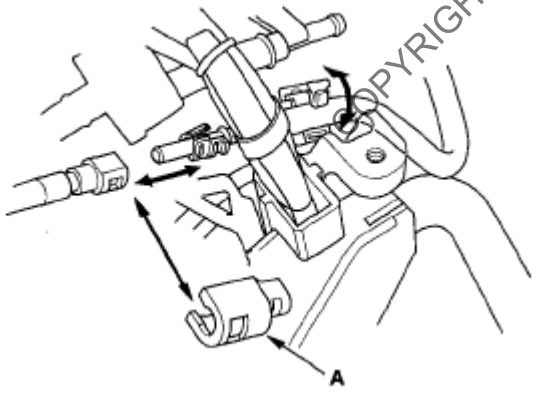

Fig. 140: Identifying Quick-Connect Fitting Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

45. Install the evaporative emission (EVAP) canister hose (A) and brake booster vacuum hose (B).

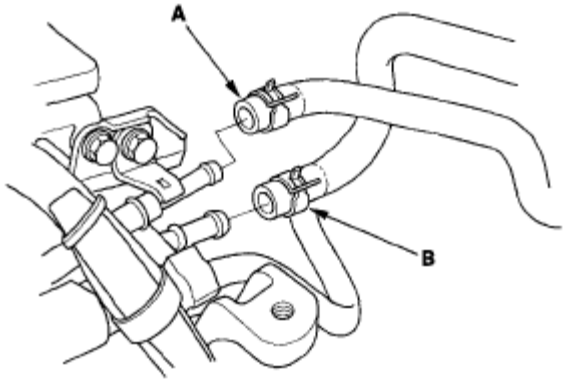

Fig. 141: Identifying Evaporative Emission (EVAP) Canister Hose And Brake Booster Vacuum Hose
Courtesy of AMERICAN HONDA MOTOR CO., INC.

46. Install the engine cover.

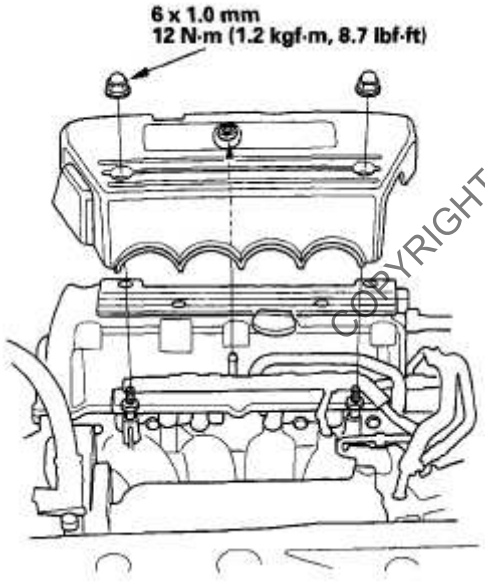

Fig. 142: Identifying Engine Cover (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

47. Connect the engine control module (ECM) connectors (A) and engine wire harness connector (B).

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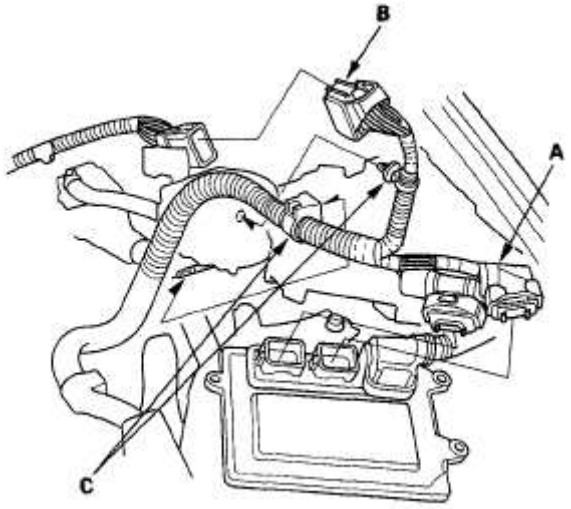

Fig. 143: Identifying Engine Control Module (ECM) Connectors And Engine Wire Harness Connector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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48. Install the harness clamps (C).
49. Install the ECM (A), then install the ECM cover (B).

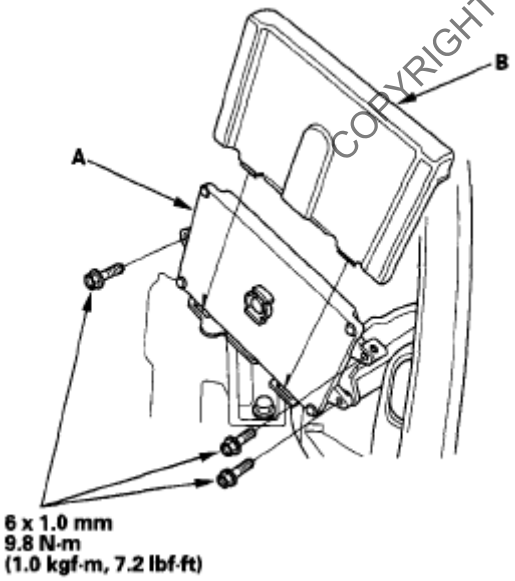

Fig. 144: Identifying ECM Cover (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

50. Install the battery cables (A) to the under-hood fuse/relay box.

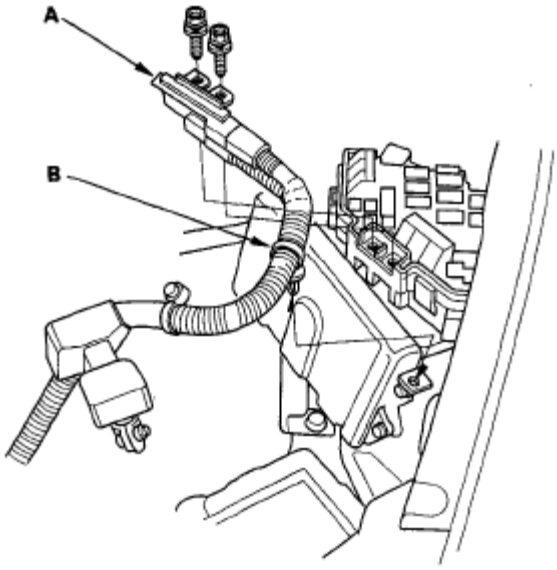

Fig. 145: Identifying Battery Cables And Harness Clamp
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51. Install the harness clamp (B).
52. Install the resonator (A) A

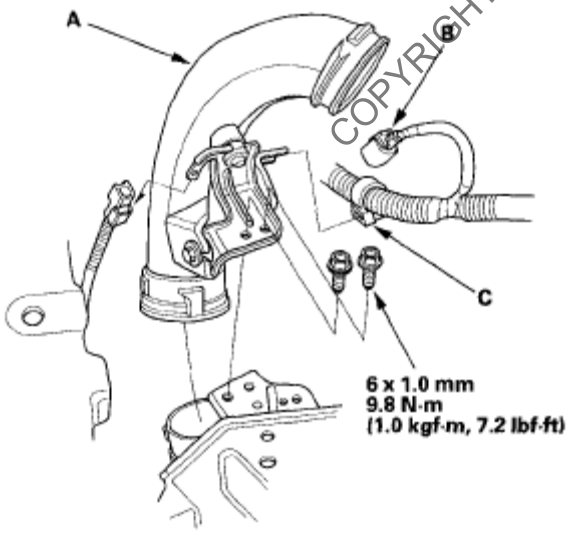

Fig. 146: Identifying Resonator And Harness Clamp
Courtesy of AMERICAN HONDA MOTOR CO., INC.

53. Connect the connector (B), and install the harness clamp (C).
54. Install the under-cowl panel (see **FRONT GRILLE COVER**

REPLACEMENT).

55. Install the air cleaner assembly (see **AIR CLEANER REMOVAL/INSTALLATION**).
56. Install the front wheels.
57. Install the battery. Clean the battery posts and cable terminals, then assemble them, and apply grease to prevent corrosion.
58. Check that the transmission shifts into gear smoothly.
59. Inspect for fuel leaks: Turn the ignition switch ON (II) (do not operate the starter) so the fuel pump runs for about 2 seconds and pressurizes the fuel line. Repeat this operation two or three times, then check for fuel leakage at any point in the fuel line.
60. Refill the engine with engine oil (see step 4 on **ENGINE OIL REPLACEMENT**).
61. Refill the transmission with fluid (see **TRANSMISSION FLUID INSPECTION AND REPLACEMENT**).
62. Refill the radiator with engine coolant, and bleed air from the cooling system with the heater valve open (see step 6 on **COOLANT CHECK**).
63. Do the ECM reset procedure (see **HDS CLEAR COMMAND**).
64. Do the crankshaft position (CKP) pattern clear/CKP pattern learn procedure (see **HDS CLEAR COMMAND**).
65. Inspect the idle speed (see **IDLE SPEED INSPECTION**).
66. Inspect the ignition timing (see **IGNITION TIMING INSPECTION**).
67. Check the wheel alignment (see **WHEEL ALIGNMENT**).
68. Enter the anti-theft code for the audio system and the navigation system (if equipped), then enter the audio presets.
69. Set the clock (on vehicles without navigation).

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SIDE ENGINE MOUNT REPLACEMENT

1. Support the engine with a jack and wood block under the oil pan.
2. Remove the upper torque rod.

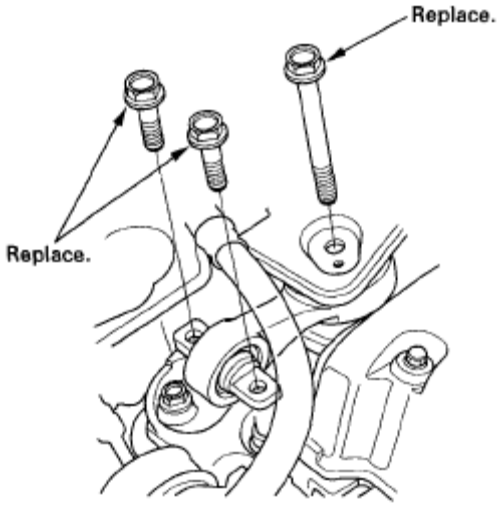

Fig. 147: Identifying Upper Torque Rod
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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3. Remove the ground cable (A), then remove the side engine mount bracket (B).

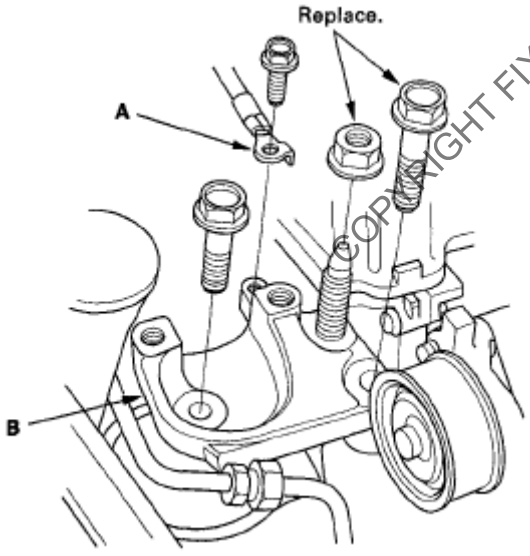

Fig. 148: Identifying Ground Cable And Side Engine Mount Bracket
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the side engine mount stiffener (A), then remove the side engine mount (B).

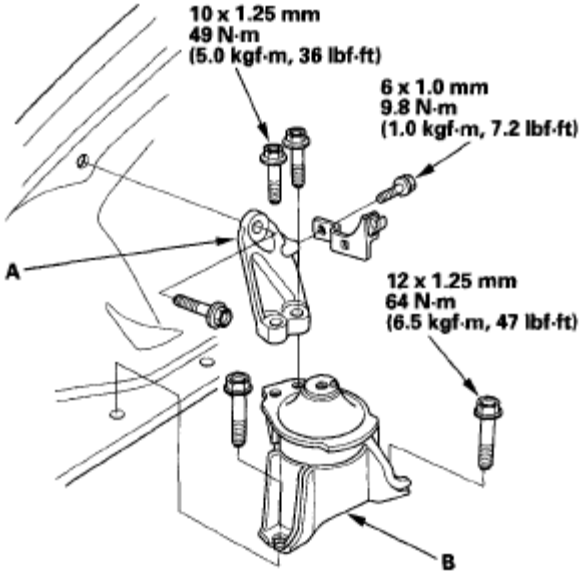

Fig. 149: Identifying Side Engine Mount (With Torque Specifications)
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5. Install the side engine mount, then install the side engine mount stiffener.
6. Install the side engine mount bracket (A), then loosely tighten the new bolt and nut (B), and loosely tighten the bolt (C).

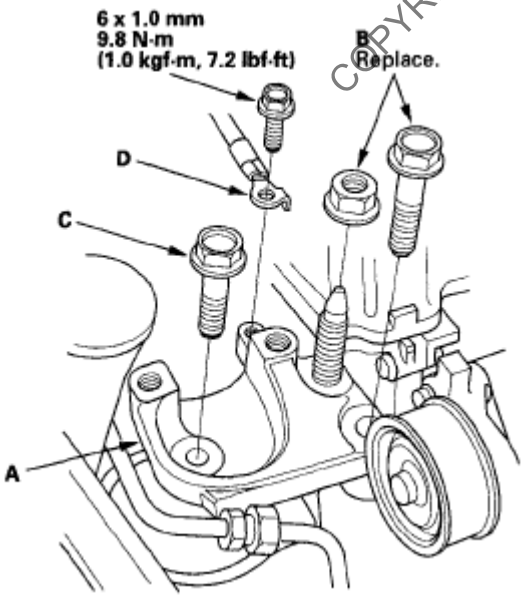

Fig. 150: Identifying Side Engine Mount Bracket (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Install the ground cable (D).
8. Remove the air cleaner assembly (see **AIR CLEANER REMOVAL/INSTALLATION**).
9. Loosen the transmission mounting bolt and nuts (A).

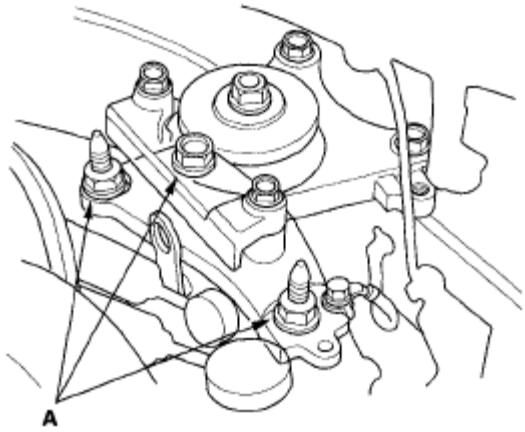

Fig. 151: Identifying Transmission Mounting Bolt And Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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10. Raise the vehicle on the lift to full height.
11. Remove the splash shield.
12. Loosen the lower torque rod mounting bolt (A).

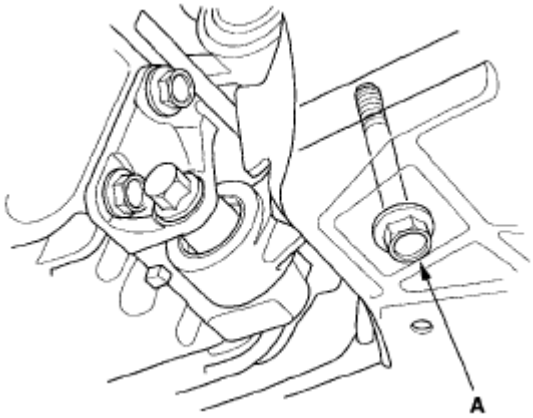

Fig. 152: Identifying Lower Torque Rod Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Loosen the front mount mounting bolt (A).

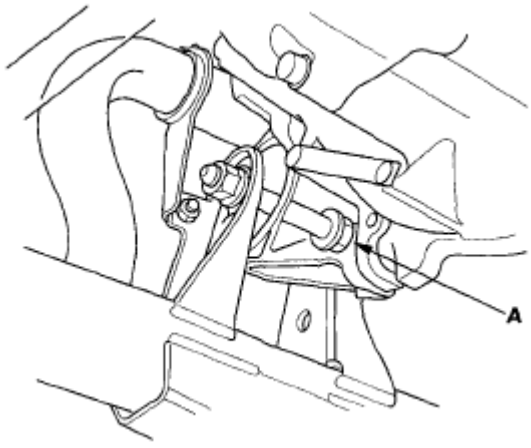

Fig. 153: Identifying Front Mount Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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14. Lower the vehicle on the lift.
15. Tighten the side engine mount mounting bolts and nut.

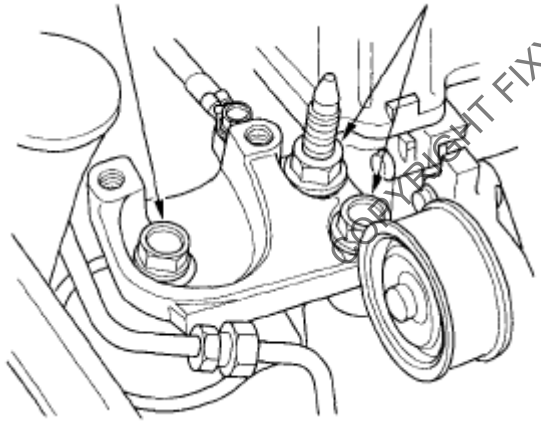

Fig. 154: Identifying Side Engine Mount Mounting Bolts And Nut
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Tighten the transmission mounting bolt and nuts.

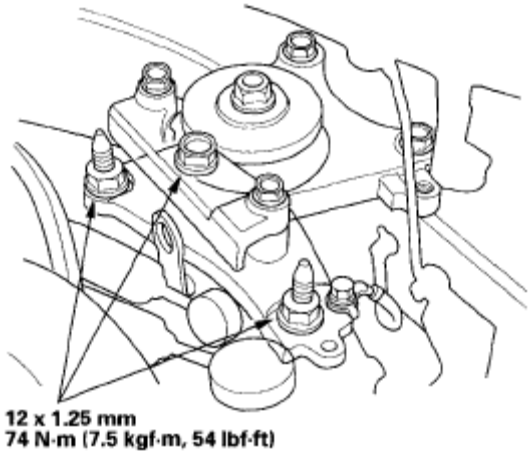

Fig. 155: Identifying Transmission Mounting Bolt And Nuts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Raise the vehicle on the lift to full height.
18. Tighten the lower torque rod mounting bolt.

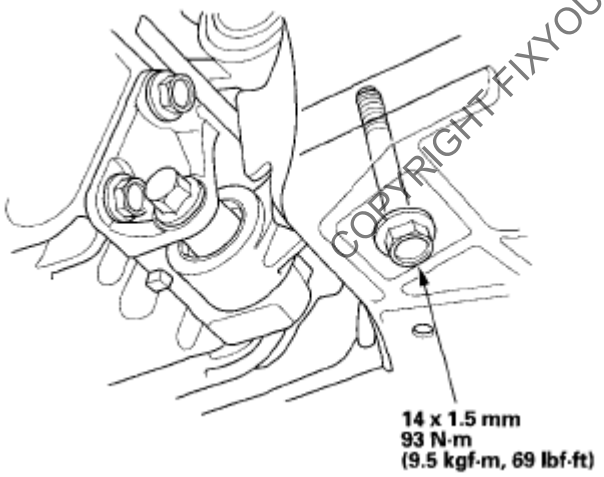

Fig. 156: Identifying Lower Torque Rod Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. Lower the vehicle on the lift.
20. Install the air cleaner assembly (see **AIR CLEANER REMOVAL/INSTALLATION**).
21. Install the upper torque rod, then tighten the new upper torque rod mounting bolts in the numbered sequence shown.

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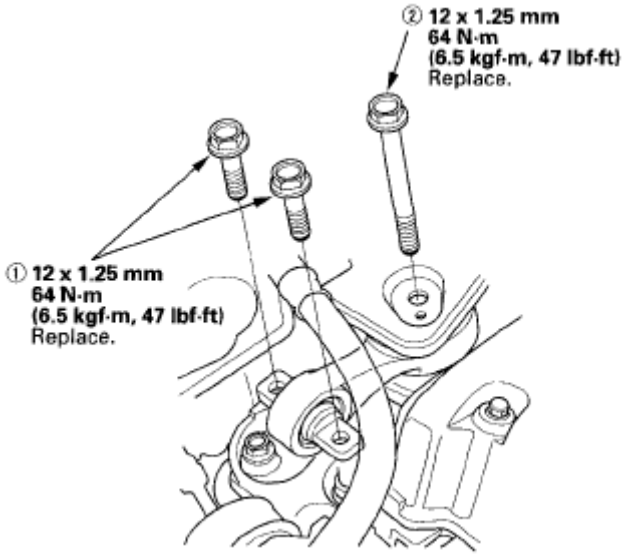

Fig. 157: Identifying Tightening Sequence For Upper Torque Rod Mounting Bolts (With Torque Specifications)
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22. Raise the vehicle on the lift to full height, and tighten the front mount mounting bolt.

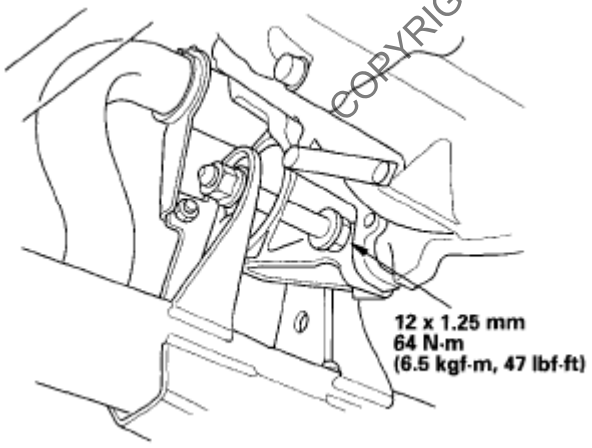

Fig. 158: Identifying Front Mount Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

23. Install the splash shield.

TRANSMISSION MOUNT REPLACEMENT

1. Loosen the upper torque rod mounting bolt (A).

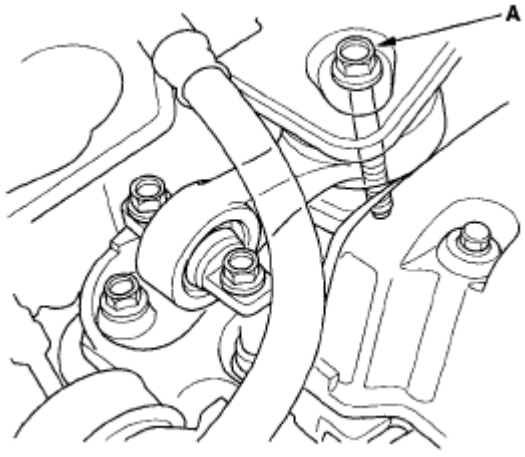

Fig. 159: Identifying Upper Torque Rod Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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2. Remove the air cleaner assembly (see **AIR CLEANER REMOVAL/INSTALLATION**).
3. Remove the engine control module (ECM) cover, then remove the three bolts securing the ECM.
4. Remove the ECM bracket.
5. Remove the under hood fuse/relay box from the bracket.
6. Support the transmission with a jack and wood block under the transmission.
7. Remove the transmission mount (A).

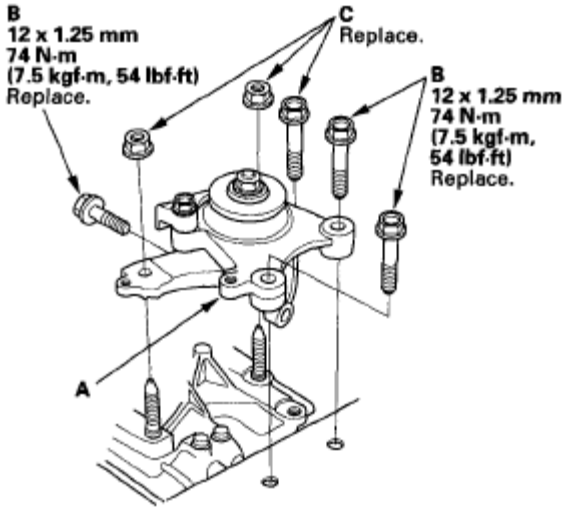

Fig. 160: Identifying Transmission Mount (With Torque Specifications)
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8. Install the transmission mount with the new mounting bolts (B).
9. Loosely tighten the new bolt and nuts (C).
10. Raise the vehicle on the lift to full height.
11. Remove the splash shield.
12. Loosen the lower torque rod mounting bolt (A).

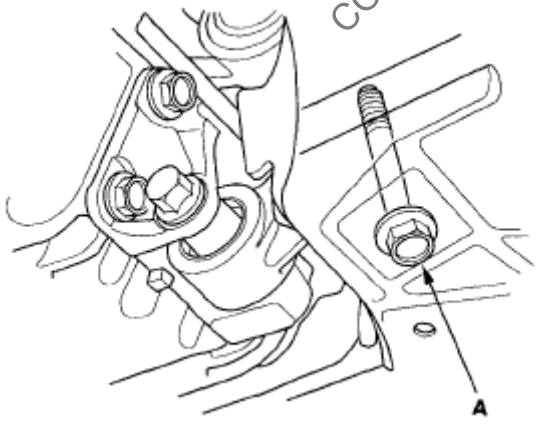

Fig. 161: Identifying Lower Torque Rod Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Loosen the front mount mounting bolt (A).

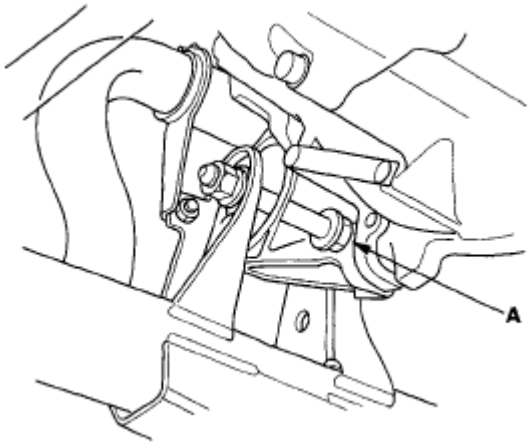

Fig. 162: Identifying Front Mount Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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14. Lower the vehicle on the lift.
15. Tighten the transmission mounting bolt and nuts.

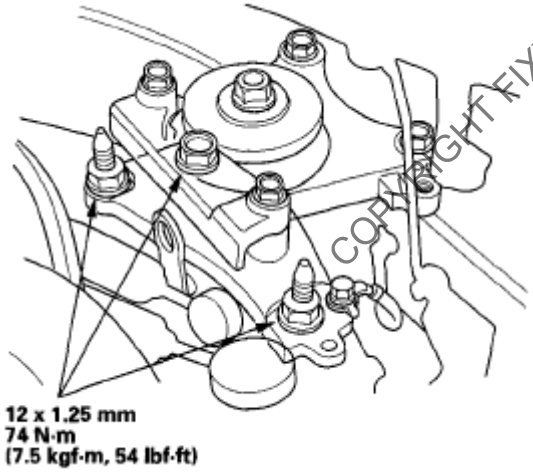

Fig. 163: Identifying Transmission Mounting Bolt And Nuts (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Raise the vehicle on the lift to full height.
17. Tighten the lower torque rod mounting bolt.

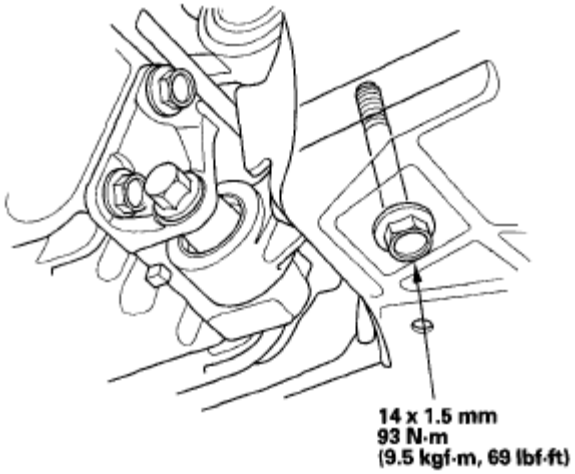

Fig. 164: Identifying Lower Torque Rod Mounting Bolt (With Torque Specifications)
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18. Lower the vehicle on the lift.
19. Tighten the upper torque rod mounting bolt.

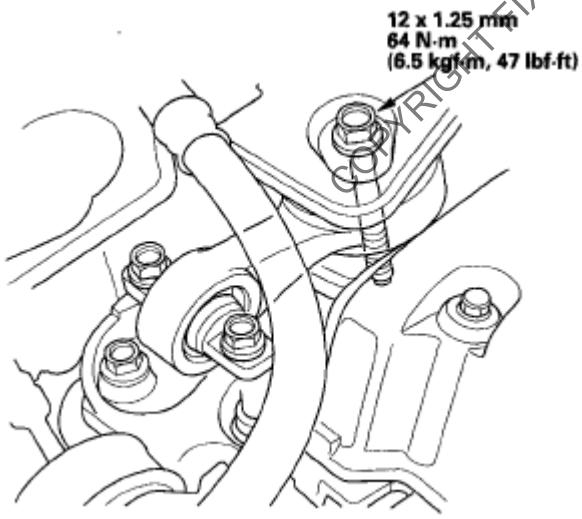

Fig. 165: Identifying Upper Torque Rod Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Install the under-hood fuse/relay box to the bracket.
21. Install the ECM bracket.

22. Install the ECM, then install the ECM cover.
23. Install the air cleaner assembly (see **AIR CLEANER REMOVAL/INSTALLATION**).
24. Raise the vehicle on the lift to full height, and tighten the front mount mounting bolt.

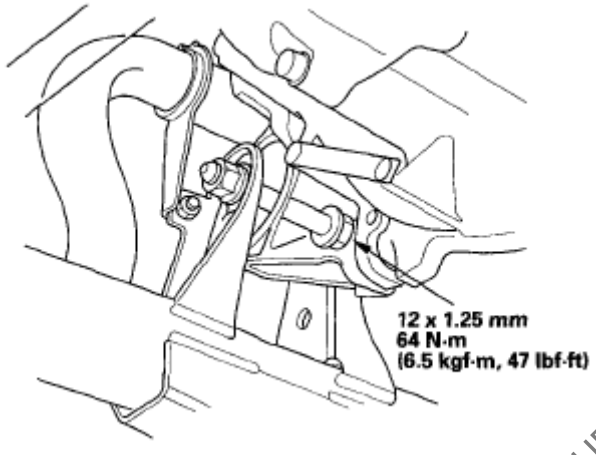

Fig. 166: Identifying Front Mount Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

25. Install the splash shield.

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LOWER TORQUE ROD REPLACEMENT

1. Loosen the upper torque rod mounting bolt (A).

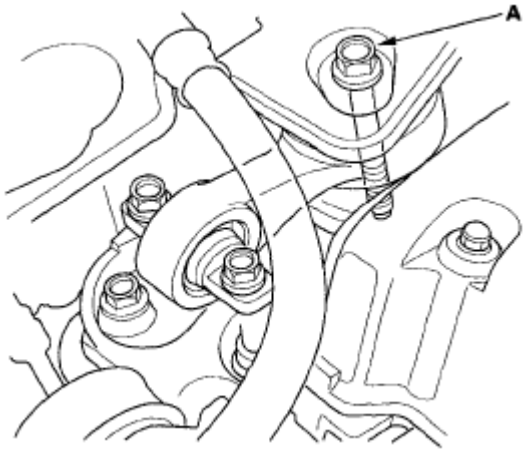

Fig. 167: Identifying Upper Torque Rod Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Raise the vehicle on the lift to full height.
3. Remove the splash shield.
4. Loosen the front mount mounting bolt (A).

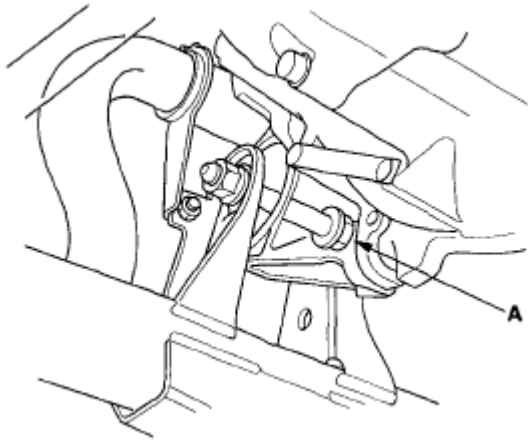

Fig. 168: Identifying Front Mount Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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5. Remove the lower torque rod (A).

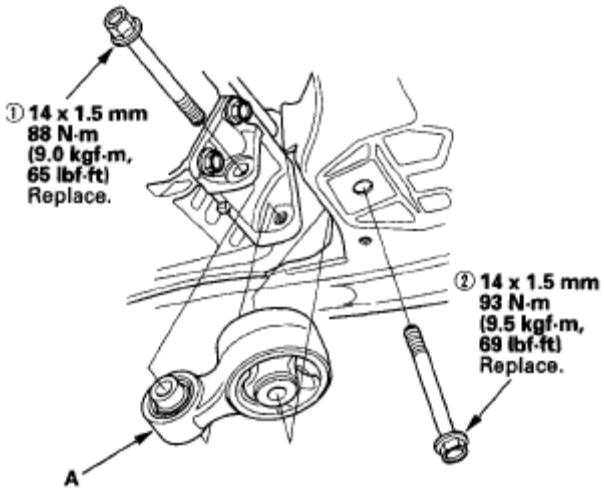

Fig. 169: Identifying Lower Torque Rod (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the lower torque rod, then tighten the new lower torque rod mounting bolts in the numbered sequence shown.
7. Lower the vehicle on the lift.
8. Tighten the upper torque rod mounting bolt.

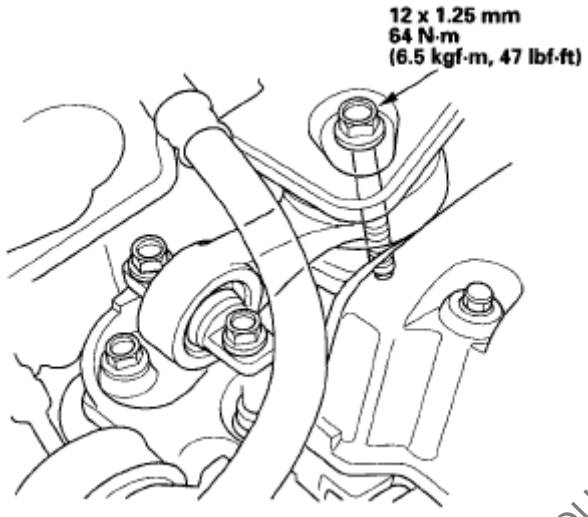

Fig. 170: Identifying Upper Torque Rod Mounting Bolt (With Torque Specifications)
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9. Raise the vehicle on the lift to full height, and tighten the front mount mounting bolt.

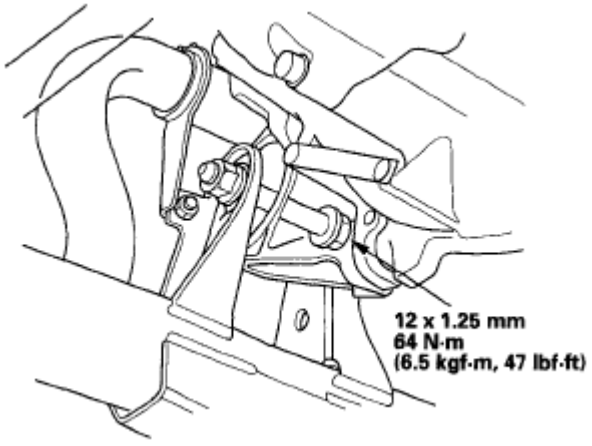

Fig. 171: Identifying Front Mount Mounting Bolt (With Torque Specifications)

Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Install the splash shield.

UPPER TORQUE ROD REPLACEMENT

1. Raise the vehicle on the lift to full height.
2. Remove the splash shield.
3. Loosen the front mount mounting bolt (A).

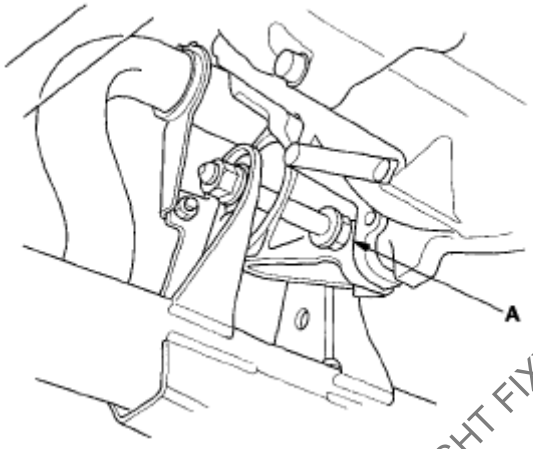

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Fig. 172: Identifying Front Mount Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the upper torque rod (A).

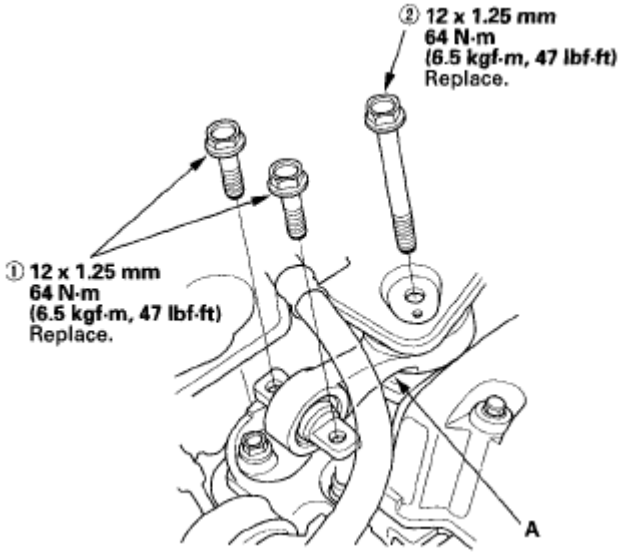

Fig. 173: Identifying Upper Torque Rod (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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5. Install the upper torque rod, then tighten the new bolts in the numbered sequence shown.
6. Raise the hoist to full height, and tighten the front mount mounting bolt.

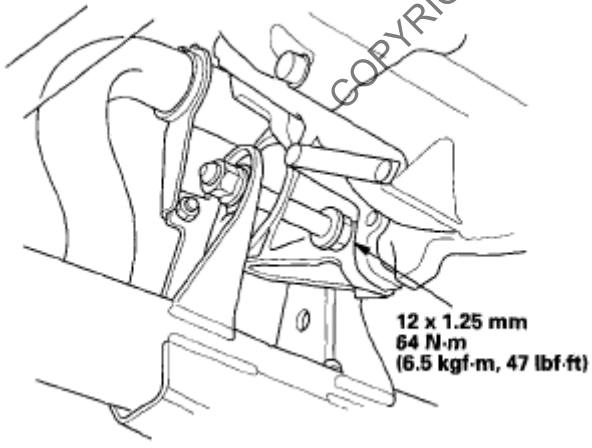

Fig. 174: Identifying Front Mount Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Install the splash shield.

SIDE ENGINE MOUNT BRACKET REPLACEMENT

1. Support the engine with a jack and wood block under the oil pan.
2. Remove the upper torque rod.

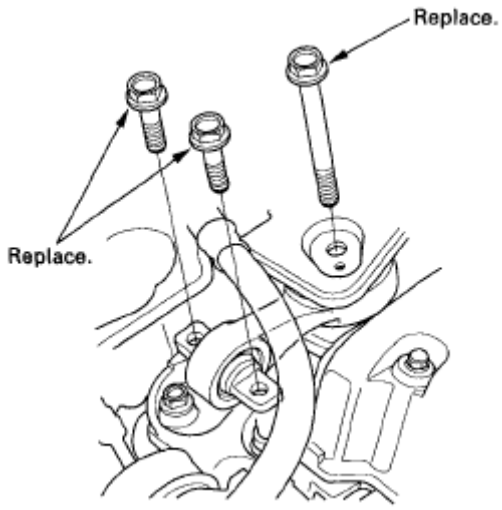

Fig. 175: Identifying Upper Torque Rod
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3. Remove the ground cable (A), then remove the side engine mount bracket (B).

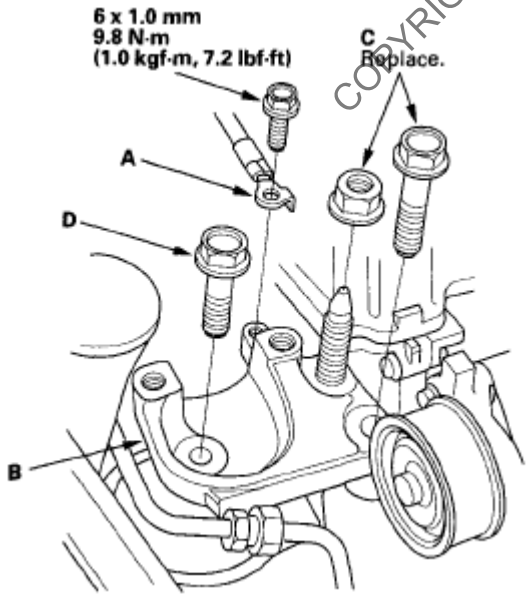

Fig. 176: Identifying Ground Cable (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the side engine mount bracket, then loosely tighten the new bolt and nut (C), and loosely tighten the bolt (D).
5. Install the ground cable.
6. Remove the air cleaner assembly (see **AIR CLEANER REMOVAL/INSTALLATION**).
7. Loosen the transmission mounting bolt and nuts (A).

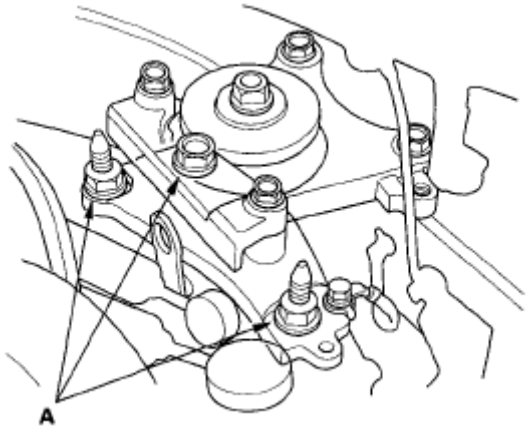

Fig. 177: Identifying Transmission Mounting Bolt And Nuts
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8. Raise the vehicle on the lift to full height.
9. Remove the splash shield.
10. Loosen the lower torque rod mounting bolt (A).

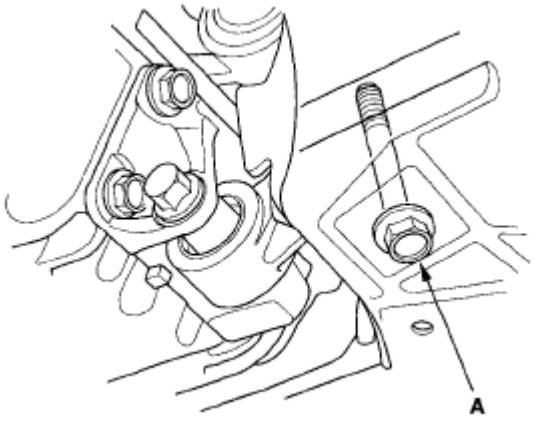

Fig. 178: Identifying Lower Torque Rod Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Loosen the front mount mounting bolt (A).

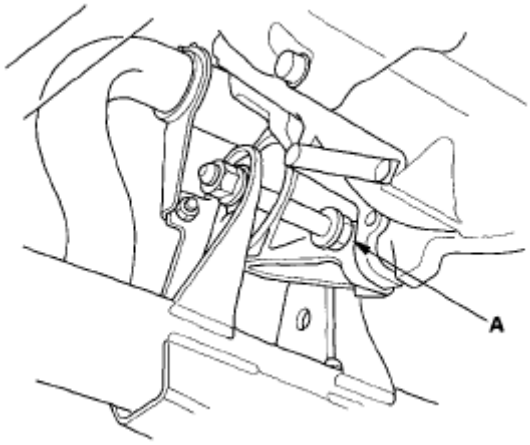

Fig. 179: Identifying Front Mount Mounting Bolt
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12. Lower the vehicle on the lift.
13. Tighten the side engine mount mounting bolts and nut.

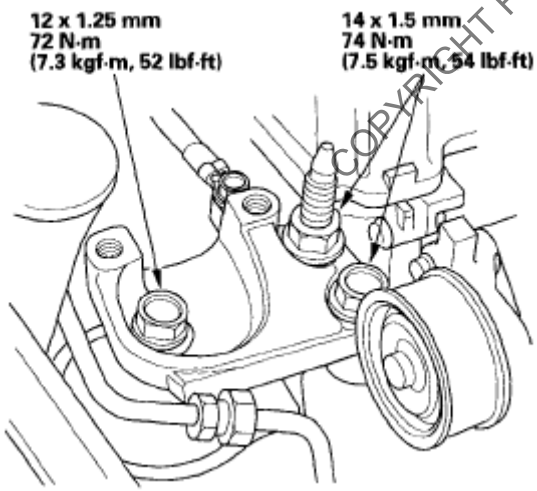

Fig. 180: Identifying Side Engine Mount Mounting Bolts And Nut (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

14. Tighten the transmission mounting bolt and nuts.

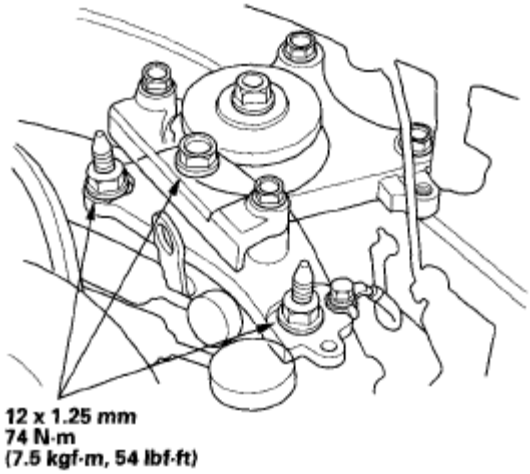

Fig. 181: Identifying Transmission Mounting Bolt And Nuts (With Torque Specifications)
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15. Raise the vehicle on the lift to full height.
16. Tighten the lower torque rod mounting bolt.

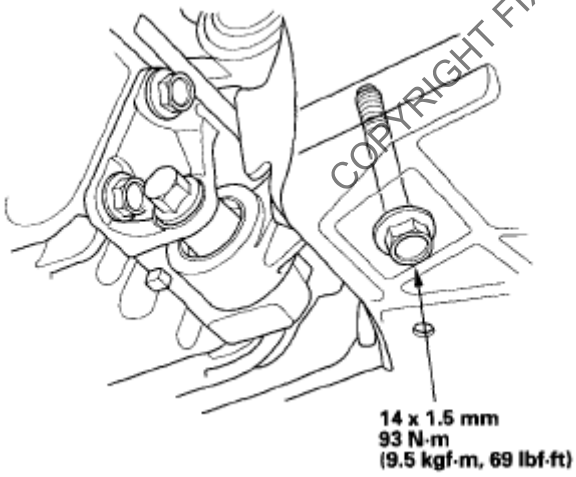

Fig. 182: Identifying Lower Torque Rod Mounting Bolt (With Torque Specifications)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Lower the vehicle on the lift.
18. Install the air cleaner assembly (see **AIR CLEANER REMOVAL/INSTALLATION**).

19. Install the upper torque rod, then tighten the new upper torque rod mounting bolts in the numbered sequence shown.

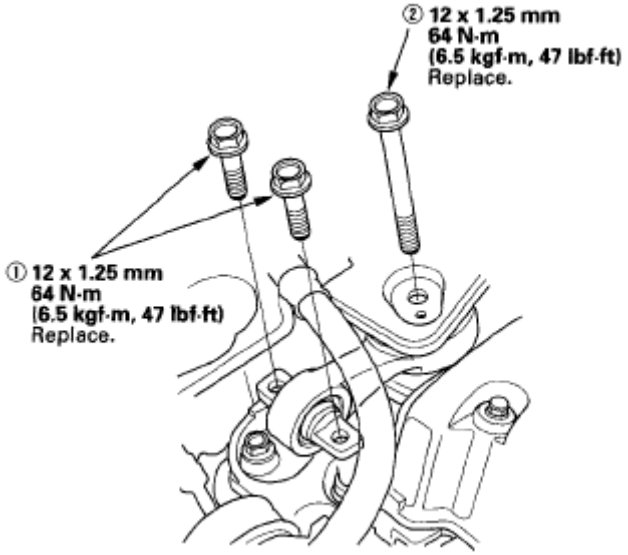

Fig. 183: Identifying Tightening Sequence For Upper Torque Rod Mounting Bolts
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20. Raise the vehicle on the lift to full height, and tighten the front mount mounting bolt.

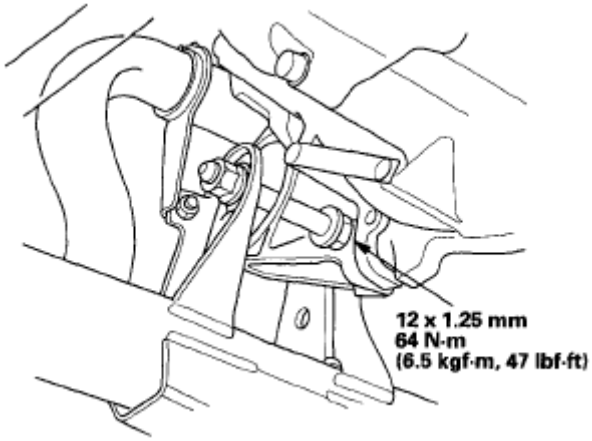

Fig. 184: Identifying Front Mount Mounting Bolt
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Install the splash shield.

FRONT ENGINE MOUNT REPLACEMENT

1. Raise the lift to full height.
2. Remove the splash shield.
3. Remove the front mount (A).

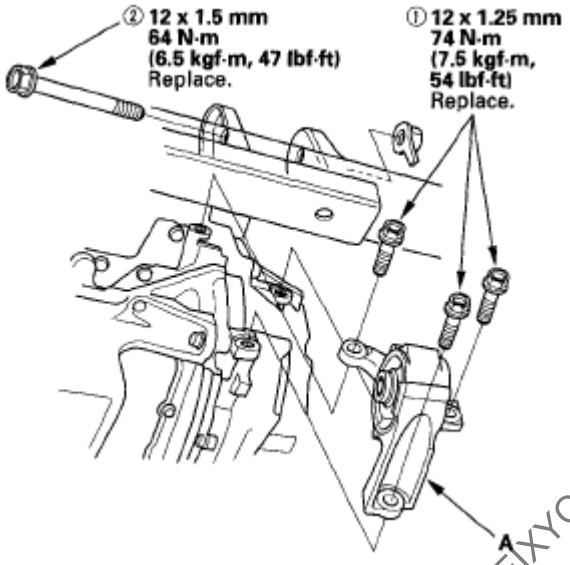

Fig. 185: Identifying Front Mount (With Torque Specifications)
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4. Install the front mount, then tighten the new front mount mounting bolts in the numbered sequence shown.
5. Install the splash shield.